NEW TABLES

FOR THE SOLUTION OF

GANGUILLET AND KUTTER'S FORMULA.

BY THE SAME AUTHOR.

SANITARY ENGINEERING:

A PRACTICAL TREATISE

ON THE

COLLECTION, REMOVAL, AND FINAL DISPOSAL OF SEWAGE, AND THE CONSTRUCTION OF WORKS OF SEWERAGE AND DRAINAGE.

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NEW TABLES

FOR THE COMPLETE SOLUTION OF

GANGUILLET AND KUTTER'S FORMULA

FOR THE

FLOW OF LIQUID IN OPEN CHANNELS, PIPES, SEWERS AND CONDUITS.

IN TWO PARTS.

PART I.

ARRANGED FOR 1,080 INCLINATIONS FROM 1 OVER 1, TO 1 OVER 21,120 FOR 15 DIFFERENT VALUES OF (n).

PART II.

FOR USE WITH ALL OTHER VALUES OF (n).

BY

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PREFACE.

GANGUILLET AND KUTTER'S formula for calculating the "Flow of Liquid in Open Channels, Pipes, Sewers, and Conduits," is universally admitted by all hydraulic engineers of experience to be pre-eminently the most accurate and reliable for the purpose that has yet been elaborated The recognition of this fact has created a demand for simple means for its solution, and one of such a nature as to afford precisely the same results as the original formula in its integrity, so as to reduce as far as possible the tax upon the time and labour of the busy professional man

A description of the formula referred to is given in my book "Sanitary Engineering",* also a "modified form" of the formula suggested by me

The use of this "modified form" was found to lessen very considerably the work of the computers when preparing the tables of velocity and discharge included in that book, this suggested the desirability of compiling a complete set of tables which should practically cover all cases of roughness and inclination likely to occur in practice, and has resulted in the production of the present volume

The tables have for convenience been divided into two parts, and include the labour saving tables from "Sanitary Engineering," which have been made still more "*labour-saving*" by supplying in each case the original logarithmic values of the various quantities where at any time they might be required

The author's "modified form" of Ganguillet and Kutter's formula is "abbreviated" for use with the tables to

$$i = \frac{NR}{\sqrt{R}+D}$$

where (i) and (R) have the usual significance, and (N) and (D) comprehend all the other quantities which figure in the numerator and denominator respectively of the "modified form"

The tables give for each of the values of (n) and the particular inclination chosen, the values of the (N) in the numerator and the

* P T Batsford Publisher, London 1898

portion of the denominator (D). It is evident that each pair of values (N) and (D) is applicable to an infinite number of values of (R) and ($\sqrt{R}$).

Part I. includes the values of (N), log. N and (D), as already described, and which form the great feature of the work, as well as all the improved labour-saving tables for use with it.

Part II. has been added for use in special cases which are not covered by the preceding. It includes all the necessary data and tables for the solution of the "modified form," the tables of values of $\left(\frac{l}{n}\right)$ and of $\sqrt{S}$, log. $\sqrt{S}$ and $\left(a + \frac{m}{S}\right)$, from "Sanitary Engineering," having been extended and improved; a diagram for the graphic solution is also included. Thus a complete solution for Ganguillet and Kutter's Formula is presented.

The tables now offered to the engineering profession thus reduce the process of calculation to the lowest possible limits, and are of very wide application. As their object is simply to save labour, it does not appear that any apology for their production is required, and it is trusted that a labour-saving work of this magnitude will meet with appreciation by all engineers who require at any time to utilize the important formula of Ganguillet and Kutter.

E. C. S. MOORE, COLONEL, R.E.

September, 1900.

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INTRODUCTION

DERIVATION OF THE TABULATED QUANTITIES

THE quantities shown in the tables are derived from Ganguillet and Kutter's formula for calculating the flow of liquid in open channels, pipes, sewers and conduits, which is as follows —

$$v = \frac{a + \frac{l}{n} + \frac{m}{S}}{1 + \left(a + \frac{m}{S}\right)\frac{n}{\sqrt{R}}} \sqrt{RS}$$

where

v = the mean velocity in feet per second

R = the hydraulic mean depth in feet, and is obtained by dividing the area of the cross section of the stream by the length of the wetted perimeter, or border

S = the sine of the inclination

n = the coefficient of roughness depending on the nature of the surface of the channel (*vide* Table of Values of n*, pages 214—216)

The quantities (a), (l) and (m) are constants derived from experiment, and with the formula in English feet, have the following values —

$$a = 41\ 6604676$$
$$l = 1\ 8113250$$
$$m = 0\ 0028075$$

The following modification of the above formula, which I have introduced, tends to simplify its solution —

$$v = \frac{\frac{l}{n} + \left(a + \frac{m}{S}\right)}{\sqrt{R} + \left(a + \frac{m}{S}\right)n} R\sqrt{S}$$

The values of $\left(a + \frac{m}{S}\right)$ and $\sqrt{S}$ are given in Table XXX for a large number (1080) of inclinations, and also the values of $\left(\frac{l}{n}\right)$ in Table XXIX

* Extracted from Sanitary Engineering B T Batsford Publisher London 1898

for a great many values of (n), so that it is comparatively easy to obtain the values both of the numerator and denominator of this fraction (excluding R and $\sqrt{\mathrm{R}}$ in either case) by combining the tabular values of the symbols corresponding to the required inclination and value of (n).

If now this were done for each of the inclinations already referred to, with one definite value of (n), then a series of values of the numerators (excluding R) and also of the denominators (excluding $\sqrt{\mathrm{R}}$) can be obtained for each value of (S) in the series.

We may therefore write the general expression in the following abbreviated form :—

$$v = \frac{\mathrm{NR}}{\sqrt{\mathrm{R}} + \mathrm{D}}$$

where

$$\mathrm{N} = \left\{ \frac{l}{n} + \left(a + \frac{m}{\mathrm{S}} \right) \right\} \sqrt{\mathrm{S}}$$

and $$\mathrm{D} = \left(a + \frac{m}{\mathrm{S}} \right) n$$

To admit of practical use the tables have been computed for 15 different values of (n), so as to meet as far as possible every case that is likely to occur.

Instead, however, of simply transferring the tables in "Sanitary Engineering" already referred to, entirely fresh calculations have been made where necessary so as to avoid any possibility of cumulative errors; in order to ensure accuracy the component parts $\left(a + \frac{m}{\mathrm{S}} \right)$ and $\frac{l}{n}$ were carried out in some cases to ten places of decimals, and where practicable the calculations were made arithmetically; the whole of the work has been most carefully checked and corrected.

The object of giving in the tables both the numerical and also the logarithmic value of (N), is to enable the value of (v) to be readily obtained either arithmetically or by logarithmic computation.

It should be remarked that log. (N) in the tables is the original logarithm obtained in each case, and the numerical value (N) is derived from it ; the whole of the tabulated quantities are believed to be correct to the nearest decimal.

APPLICATION OF THE TABLES

In calculations for the velocity and discharge of water in pipes or conduits, it is always necessary to obtain the value of (A), the area of the cross section of the stream, and the $\sqrt{R}$ where (R) is the hydraulic mean depth

The following are examples of the use of the tables —

PART I

Example I.

To ascertain the velocity of the discharge of a rectangular conduit 6 feet wide, constructed of dressed ashlar in fair condition, running 2 feet deep, with an inclination of 1 in 1000

Preliminaries

From list of values of (n), p xvi and Table XXVIII p 216, we may take $n = 015$

$A = 2 \times 6 = 12$ sq feet $\quad R = \frac{12}{2+6+2} = \frac{12}{10} = 1\,2$ feet and $\sqrt{R} = 1\,095$

$$\text{now} \quad v = \frac{N\sqrt{R}}{\sqrt{R}+D}$$

and from page 56 we have

$$N = 5\,225, \log N = 0\,7180704, \text{ and } D = 6670$$

1st, calculating arithmetically —

$$v = \frac{5\,225 \times 1\,2}{667 + 1\,095} = \frac{6\,27}{1\,762} = 3\,558 \text{ feet per second}$$

$$Q = Av = 12 \times 3\,558 = 42\,69 \text{ cubic feet per second}$$

2nd, by logarithmic method —

	$\log N =$	$0\,7180704$
$D = 667$	$\log R =$	$0\,0791812$
$\sqrt{R} = 1\,095$		$0\,7972516$
$\log 1\,762 =$		$0\,2460059$
$\log v = \log 3\,5583 =$		$0\,5512457$ by subtraction
$\log A = \log 12 =$		$1\,0791812$
$\log Q = \log 42\,699 =$		$1\,6304269$

$v = 3\,5583$ *feet per second and* $Q = 42\,699$ *cubic feet per second*

EXAMPLE II.

To ascertain the discharge of an 8-foot circular sewer, constructed of dressed ashlar in "fair" condition, running one-half full and having an inclination of 1 in 1000.

Preliminaries.

(n) may be taken from the above conditions to be ·015 in accordance with Table XXVIII., the values (N), log. N, and (D) are given at p. 56, and are the same as in the previous example.

$$N=5{\cdot}225,\ \log. N=0{\cdot}7180704,\ \text{and}\ D={\cdot}6670$$

From Table II., p. 166. $R=8\times{\cdot}250=2$ $\therefore$ $\sqrt{R}=1{\cdot}4142136$

„ Table XXI., p. 205. $A=\frac{50{\cdot}266}{2}=25{\cdot}133$ sq. feet.

$$\text{now}\quad v=\frac{NR}{\sqrt{R}+D}$$

1st, calculating arithmetically:—

$$v=\frac{5{\cdot}225\times 2}{{\cdot}6670+1{\cdot}4142}=\frac{10{\cdot}45}{2{\cdot}0812}=5{\cdot}021 \text{ feet per second.}$$

$$Q=A\,v=25{\cdot}133\times 5{\cdot}021=126{\cdot}19 \text{ cubic feet per second.}$$

2nd, by logarithmic method:—

	log. N =	0·7180704	
D = ·6670195	log. 2 =	0·3010300	
$\sqrt{R}$ = 1·4142136		1·0190704	
log. 2·0812331	=	0·3183207	
log. v = log. 5·02087	=	0·7007797	by subtraction.
log. A from Table II., p. 166	=	$\bar{1}$·5940599	
2 log. 8 = 2 × 0·9030900	=	1·8061800	
log. Q = log. 126·1884	=	2·1010196	

$\therefore$ v=5·02087 feet per second, and Q=126·1884 cubic feet per second.

EXAMPLE III.

To ascertain whether a 9-inch pipe with an inclination of 1 in 150, and flowing 1·44 inches deep will have a self-cleansing velocity, and the amount discharged.

Preliminaries.

$$\text{Now}\quad v=\frac{NR}{\sqrt{R}+D}$$

From Table XXVIII., p. 216. n = ·013

„ Table IX., p. 180. log. R = $\bar{2}$·8687290 $\sqrt{R}$ = ·27187

log. A = $\bar{2}$·6592076

„ Table I., p. 18. log. N = 1·1706257

D = ·54706070

By logarithmic method —

$\log N = 1.1706257$

$D = .4706$ $\log R = \underline{2.8687290}$

$\sqrt{R} = .27187$ 0.0393547

$\log .8189 = \underline{\bar{1}.9132408}$

$\log i = \log 1.3769 = 0.1261079$ *by subtraction*

$\log. A = \underline{\bar{2}.6592076}$

$\log Q = \log .060998 = \underline{\bar{2}.7853155}$

$i = 1.3769$ feet per second, and $Q = .060998$ cubic feet per second

The velocity will not be sufficient to keep the drain clear

EXAMPLE IV

It is required to find the velocity and discharge of an egg shaped sewer 6ft × 9ft (new form) flowing one third full with an inclination of 1 in 162·5 and rendered in neat cement

Preliminaries

(n) may be taken as equal to .0115, and thus having an intermediate value beyond those provided for in Part I, we must use the "modified form"

$$i = \frac{\frac{l}{n} + \left(a + \frac{m}{S}\right)}{\sqrt{R} + \left(a + \frac{m}{S}\right) n} R\sqrt{S}$$

From Table XXIX, p. 217 $\frac{l}{n} = 157.5062$

" Table XXX, p. 224 $a + \frac{m}{S} = \underline{46.22266}$

$\log 206.72918 = 2.3090532$

" Table XXIII, p. 208 $\log R = 0.0613724$

" Table XXX p. 224 $\log \sqrt{S} = \underline{\bar{2}.3945733}$

0.7649989

Table XXIII, p. 208 $\sqrt{R} = 1.0757$

$\left(a + \frac{m}{S}\right) n = 46.22266 \times .0115 = \underline{.5316}$

$\log \underline{1.6073} = 0.2060969$

$\log i = \log 3.6216 = 0.5589020$ *by subtraction*

Table XXIII p. 208 $\log A = \underline{0.9616131}$

$\log Q = \log 33.1524 = 1.5205151$

$v = 3.6216$ *feet per second, and* $Q = 33.1524$ *cubic feet per second*

Graphic Method.

Example V.

To ascertain the velocity and discharge of an 8-foot circular sewer with an inclination of 1 in 1000, flowing half-full, where $n = \cdot 015$, as in Example II., but using the Graphic Method, where $v = c\sqrt{RS}$. Spread out carefully the Plate for the graphical determination of the value of (c) on a drawing board, and insert a pin at the intersection of the (n) line ·015 with the "slope curve" 1 in 1000, and another in the scale of $\sqrt{R}$ where $\sqrt{R} = 1\cdot414$ as below; stretch a fine thread of silk between these two pins, and the intersection on the scale of (c) gives $c = 112\cdot2$.

From Table II., p. 166. $R = 8 \times \cdot 250$

	log. 8 =	0·9030900
	log. 25 =	1·3979400
	2)	0·3010300
log. $\sqrt{R}$ = log. 1·4142136 =		0·1505150
From Table XXX., p. 223. log. $\sqrt{S}$ =		$\bar{2}\cdot5$
log. c = log. 112·2 =		2·0499929
log. v = log. 5·0177 =		0·7005079
log. A from Table II., p. 166 =		$\bar{1}\cdot5940599$
2 log. 8 = 2 × 0·9030900 =		1·8061800
log. Q = log. 126·194 =		2·1007478

$\therefore v = 5\cdot0177$ feet per second, and $Q = 126\cdot194$ cubic feet per second.

The results would be more accurate if it were practicable to read the value of (c) more correctly.

PART I.

TABLES FOR THE SOLUTION

OF THE "ABBREVIATED FORM"

OF

GANGUILLET AND KUTTER'S FORMULA.

$$v = \frac{NR}{\sqrt{R+D}} \text{ and } Q = Av$$

where

$$N = \left\{\frac{l}{n} + \left(a + \frac{m}{S}\right)\right\}\sqrt{S}$$

$$D = \left(a + \frac{m}{S}\right)n$$

FOR SPECIAL VALUES OF (S) AND (n).

THE FOLLOWING VALUES OF (n) AS COMPILED FROM KUTTER, JACKSON, AND HERING, BY FLYNN ARE THOSE USED IN TABLE I. (*pages 1—165*).

$n =$ ·009	Well-planed timber, in perfect order and alignment; otherwise, perhaps ·01 would be suitable.
$n =$ ·010	Plaster in pure cement; planed timber; glazed, coated, or enamelled stoneware and iron pipes; glazed surfaces of every sort in perfect order.
$n =$ ·011	Plaster in cement with one-third sand in good condition; also for iron, cement, and terra-cotta pipes, well joined and in best order.
$n =$ ·012	Unplaned timber, when perfectly continuous on the inside; flumes.
$n =$ ·013	Ashlar and well-laid brickwork; ordinary metal; earthenware and stoneware pipe in good condition, but not new; cement and terra-cotta pipe not well jointed nor in perfect order; plaster and planed wood in imperfect or inferior condition; and, generally, the materials mentioned with $n =$ ·010, when in imperfect or inferior condition.
$n =$ ·014	Intermediate value.
$n =$ ·015	Second-class or rough-faced brickwork; well-dressed stonework; foul and slightly tuberculated iron; cement and terra-cotta pipes, with imperfect joints and in bad order; and canvas lining on wooden frames.
$n =$ ·017	Brickwork, ashlar, and stoneware in an inferior condition; tuberculated iron pipes; rubble in cement or plaster, in good order; fine gravel, well rammed, $\frac{1}{8}$ to $\frac{2}{3}$ inches diameter; and, generally, the materials mentioned with $n =$ ·013, when in bad order and condition.
$n =$ ·020	Rubble in cement in an inferior condition; coarse rubble, rough-set in a normal condition; coarse rubble set dry; ruined brickwork and masonry; coarse gravel, well rammed, from 1 to 1$\frac{1}{2}$ inch diameter; canals with beds and banks of very firm, regular gravel, carefully trimmed and rammed in defective places; rough rubble, with bed partially covered with silt and mud; rectangular wooden troughs, with battens on the inside 2 inches apart; trimmed earth in perfect order.
$n =$ ·0225	Canals in earth above the average in order and regimen.
$n =$ ·025	Canals and rivers in earth of tolerably uniform cross-section, inclination, and direction, in moderately good order and regimen, and free from stones and weeds.
$n =$ ·0275	Canals and rivers in earth below the average in order and regimen.
$n =$ ·030	Canals and rivers in earth in rather bad order and regimen, having stones and weeds occasionally, obstructed by detritus.
$n =$ ·035	Suitable for rivers and canals with earthen beds in bad order and regimen, and having stones and weeds in great quantities.
$n =$ ·05	Torrents encumbered with detritus.

ERRATA.

A careful examination of the pages of this book after printing has led to the discovery of the following misprints —

Page 66 (*column* 3)—The decimal points to values of log N for sines of inclinations 1355 to 1423 inclusive, should be shifted one place to the right, viz after the 0 not before as at present

Page 166 *Depth on invert* 40—log R should read "$\bar{1}$ 8308732,' log A should read "$\bar{1}$ 4674157

Page 168 *Depth on invert* 40—log R should read "$\bar{2}$ 7288132 ' $\sqrt{R}$ should read " 2314, ' log A should read "$\bar{2}$ 2632907

Page 169 *Depth on invert* 95—log R should read ' $\bar{2}$ 8549912 '

Page 170 *Depth on invert* 40—log R should read "$\bar{2}$ 8537419 log A should read "$\bar{2}$ 5131732

Page 172 *Depth on invert* 05—log R should read ' 2 1823428

Page 174 *Depth on invert* 40—log A should read "$\bar{2}$ 8653557

Page 178 *Depth on invert* 40—log A should read "$\bar{1}$ 1152331

Page 180 *Depth on invert* 40—log A should read ' 1 2175383

Page 182 *Depth on invert* 40—log A should read ' $\bar{1}$ 3090531

Page 185 *Depth on invert* 78—A decimal point should be placed in front of the value of $\sqrt{R}$, reading 52708

Page 186 *Depth on invert* 40—log A should read ' $\bar{1}$ 4674157

Page 187 *Depth on invert* 95—R should read ' 28516

Page 188 *Depth on invert* 40—log A should read "$\bar{1}$ 6612357

Page 190 *Depth on invert* 40—log A should read ' 1 8195983

Page 193

Depth on invert 69—H M D should read 51592

" , , 77—log R should read 1 7215738 log A should read ' 0 2982759

, , , 78—log R should read ' 1 7253027, log A should read 0 3038290

, " " 79—log R should read ' $\bar{1}$ 7258338 ' A should read

, " , 80—

, , 81—H M D should read ' 53259

, " " 82—value of $\sqrt{R}$ should read ' 72970

" " " 83—value of $\sqrt{R}$ should read " 72949

Page 194

Depth on invert 16—H M D should read " 19710

" " , 40—log A should read ' 0 0694757

Page 195

Depth on invert

" " "

" " "

" " "

Page 198 *Depth on invert* 05—$\sqrt{R}$ should read " 28526 '

Page 202 *Depth on invert* 40—log A should read "0 4216583 '

E C S MOORE,
Colonel R E (Ret)

Sine of Inclination (1 over)	n = 009			n = 010			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1	242·921	2 3854661	37496948	222 796	2 3479069	41663275	1
2	171 773	2 2349562	37499474	157 542	2 1973974	41666083	2
3	140 254	2 1469156	37502001	128 634	2 1093573	41668890	3
4	121 465	2 0844312	37504528	111 402	2 0468933	41671698	4
5	108 643	2 0360012	37507055	99 642	1 9984438	41674505	5
6	99 178	1 9964156	37509581	96 961	1 9588587	41677313	6
7	91 822	1 9629472	37512108	84 215	1 9253908	41680120	7
8	85 892	1 9339562	37514635	78 777	1 8964002	41682928	8
9	80 981	1 9083849	37517162	74 272	1 8708294	41685735	9
10	76 826	1 8855112	37519688	70 462	1 8479562	41688543	10
11	73 252	1 8648200	37522215	67 184	1 8272653	41691350	11
12	70 134	1 8459307	37524742	64 325	1 8083765	41694158	12
13	67 384	1 8285547	37527269	61 802	1 7910009	41696965	13
14	64 933	1 8124674	37529795	59 554	1 7749141	41699773	14
15	62 732	1 7974908	37532322	57 536	1 7599379	41702580	15
16	60 741	1 7834814	37534849	55 709	1 7459290	41705388	16
17	58 928	1 7703219	37537376	54 046	1 7327699	41708195	17
18	57 268	1 7579151	37539902	52 525	1 7203636	41711003	18
19	55 741	1 7461797	37542429	51 121	1 7086286	41713810	19
20	54 331	1 7350465	37544956	49 831	1 6974958	41716618	20
21	53 022	1 7244569	37547483	48 630	1 6869067	41719425	21
22	51 804	1 7143602	37550009	47 513	1 6768105	41722233	22
23	50 666	1 7047126	37552536	46 469	1 6671634	41725040	23
24	49 599	1 6954759	37555063	45 491	1 6579271	41727848	24
25	48 598	1 6866165	37557590	44 572	1 6490682	41730655	25
26	47 655	1 6781049	37560116	43 707	1 6405570	41733463	26
27	46 764	1 6699147	37562643	42 891	1 6323673	41736270	27
28	45 922	1 6620226	37565170	42 119	1 6244756	41739078	28
29	45 124	1 6544076	37567697	41 387	1 6168611	41741885	29
30	44 366	1 6470510	37570223	40 692	1 6095050	41744693	30
31	43 645	1 6399358	37572750	40 031	1 6023903	41747500	31
32	42 958	1 6330466	37575277	39 401	1 5955015	41750308	32
33	42 303	1 6263696	37577804	38 799	1 5888250	41753115	33
34	41 677	1 6198922	37580330	38 226	1 5823580	41755923	34
35	41 077	1 6136027	37582857	37 675	1 5760589	41758730	35
36	40 503	1 6074904	37585384	37 149	1 5699471	41761538	36
37	39 953	1 6015458	37587911	36 644	1 5640030	41764345	37
38	39 424	1 5957599	37590437	36 159	1 5582176	41767153	38
39	38 916	1 5901244	37592964	35 693	1 5525825	41769960	39
40	38 427	1 5846318	37595491	35 244	1 5470903	41772768	40
41	37 956	1 5792749	37598018	34 812	1 5417339	41775575	41
42	37 501	1 5740472	37600544	34 396	1 5365066	41778383	42
43	37 063	1 5689426	37603071	33 994	1 5314023	41781190	43
44	36 640	1 5639555	37605598	33 606	1 5264157	41783998	44
45	36 231	1 5590806	37608125	33 231	1 5215413	41786805	45
46	35 835	1 5543130	37610651	32 868	1 5167742	41789613	46
47	35 452	1 5496480	37613178	32 517	1 5121096	41792420	47
48	35 081	1 5450813	37615705	32 177	1 5075434	41795228	48
49	34 722	1 5406089	37618232	31 847	1 5030715	41798035	49
50	34 373	1 5362270	37620758	31 528	1 4986900	41800843	50

Sine of Inclination (1 over)	n = ·011			n = ·012			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1	206·392	2·3145607	·45829603	192·607	2·2846721	·49995930	1
2	145·899	2·1640515	·45832691	136·196	2·1341634	·49999299	2
3	119·127	2·0760118	·45835779	111·205	2·0461241	·50002668	3
4	103·167	2·0135483	·45838867	96·308	1·9836611	·50006037	4
5	92·278	1·9650992	·45841956	86·142	1·9352124	·50009406	5
6	81·239	1·9255145	·45845044	78·637	1·8956281	·50012775	6
7	77·991	1·8920470	·45848132	72·805	1·8621611	·50016144	7
8	72·955	1·8630569	·45851220	68·104	1·8331715	·50019513	8
9	68·784	1·8374865	·45854309	64·210	1·8076015	·50022882	9
10	65·255	1·8146137	·45857397	60·916	1·7847291	·50026251	10
11	62·219	1·7939233	·45860485	58·081	1·7640391	·50029620	11
12	59·571	1·7750350	·45863573	55·610	1·7451511	·50032989	12
13	57·234	1·7576598	·45866661	53·429	1·7277764	·50036358	13
14	55·154	1·7415735	·45869750	51·486	1·7116904	·50039727	14
15	53·284	1·7265978	·45872838	49·741	1·6967151	·50043096	15
16	51·592	1·7125893	·45875926	48·162	1·6827071	·50046465	16
17	50·053	1·6994307	·45879015	46·725	1·6695489	·50049834	17
18	48·643	1·6870248	·45882103	45·409	1·6571434	·50053203	18
19	47·347	1·6752902	·45885191	44·199	1·6454092	·50056572	19
20	46·148	1·6641579	·45888279	43·080	1·6342774	·50059941	20
21	45·037	1·6535692	·45891368	42·042	1·6236892	·50063310	21
22	44·002	1·6434734	·45894456	41·077	1·6135938	·50066679	22
23	43·035	1·6338267	·45897544	40·174	1·6039475	·50070048	23
24	42·130	1·6245909	·45900632	39·329	1·5947121	·50073417	24
25	41·279	1·6157324	·45903721	38·535	1·5858540	·50076786	25
26	40·478	1·6072216	·45906809	37·787	1·5773436	·50080155	26
27	39·722	1·5990323	·45909897	37·081	1·5691547	·50083524	27
28	39·007	1·5911411	·45912985	36·413	1·5612640	·50086893	28
29	38·329	1·5835270	·45916074	35·781	1·5536503	·50090262	29
30	37·685	1·5761713	·45919162	35·180	1·5462950	·50093631	30
31	37·073	1·5690570	·45922250	34·608	1·5391812	·50097000	31
32	36·489	1·5621688	·45925338	34·064	1·5322933	·50100369	32
33	35·933	1·5554927	·45928427	33·544	1·5256176	·50103738	33
34	35·401	1·5490161	·45931515	33·048	1·5191415	·50137107	34
35	34·892	1·5427275	·45934603	32·573	1·5128533	·50110476	35
36	34·405	1·5366161	·45937691	32·118	1·5067423	·50113845	36
37	33·937	1·5306723	·45940780	31·681	1·5007990	·50117214	37
38	33·488	1·5248873	·45943868	31·262	1·4950144	·50120583	38
39	33·056	1·5192527	·45946956	30·859	1·4893802	·50123952	39
40	32·641	1·5137610	·45950044	30·471	1·4838889	·50127321	40
41	32·241	1·5084050	·45953133	30·098	1·4785334	·50130690	41
42	31·855	1·5031782	·45956221	29·738	1·4733070	·50134059	42
43	31·483	1·4980744	·45959309	29·390	1·4682036	·50137428	43
44	31·123	1·4930882	·45962397	29·054	1·4632178	·50140797	44
45	30·776	1·4882142	·45965486	28·730	1·4583442	·50144166	45
46	30·440	1·4834475	·45968574	28·417	1·4535779	·50147535	46
47	30·115	1·4787834	·45971662	28·113	1·4489142	·50150904	47
48	29·800	1·4742176	·45974750	27·819	1·4443489	·50154273	48
49	29·497	1·4697761	·45977839	27·534	1·4398779	·50157642	49
50	29·199	1·4653650	·45980927	27·258	1·4354972	·50161011	50

Sine of Inclination 1 over	n = 013			n = ·014			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1	180 996	2 2576689	54162258	171 044	2 2331068	58328585	1
2	127 985	2 1071606	54165907	120 948	2 0825990	58332516	2
3	104 501	2 0191217	54169557	98 755	1 9945605	58336446	3
4	90 502	1 9566591	54173207	95 526	1 9320983	58340376	4
5	80 949	1 9082108	54176857	76 498	1 8836504	58344307	5
6	73 897	1 8686270	54180506	69 834	1 8440669	58348238	6
7	68 416	1 8351603	54184156	64 655	1 8106006	58352168	7
8	63 999	1 8061710	54187806	60 480	1 7816118	58356099	8
9	60 340	1 7806015	54191456	57 022	1 7560426	58360029	9
10	57 244	1 7577295	54195105	54 097	1 7331710	58363960	10
11	54 581	1 7370399	54198755	51 580	1 7121418	58367890	11
12	52 258	1 7181524	54202405	49 385	1 6935946	58371820	12
13	50 209	1 7007780	54206055	47 448	1 6762207	58375751	13
14	48 383	1 6846924	54209704	45 723	1 6601355	58379682	14
15	46 743	1 6697175	54213354	44 173	1 6451611	58383612	15
16	45 259	1 6557098	54217004	42 771	1 6311538	58387543	16
17	43 909	1 6425521	54220654	41 495	1 6179964	58391473	17
18	42 672	1 6301470	54224303	40 327	1 6055917	58395404	18
19	41 535	1 6184133	54227953	39 251	1 5938584	58399334	19
20	40 484	1 6072818	54231603	38 258	1 5827273	58403265	20
21	39 509	1 5966939	54235253	37 337	1 5721398	58407195	21
22	38 601	1 5865990	54238902	36 479	1 5620452	58411126	22
23	37 753	1 5769531	54242552	35 678	1 5523997	58415056	23
24	36 959	1 5677181	54246202	34 927	1 5431652	58418987	24
25	36 213	1 5588605	54249852	34 222	1 5343079	58422917	25
26	35 510	1 5503505	54253501	33 558	1 5257983	58426848	26
27	34 847	1 5421621	54257151	32 931	1 5176103	58430778	27
28	34 219	1 5342717	54260801	32 339	1 5097203	58434709	28
29	33 625	1 5266584	54264451	31 777	1 5021074	58438639	29
30	33 060	1 5193036	54268100	31 243	1 4947530	58442570	30
31	32 523	1 5121901	54271750	30 735	1 4876399	58446500	31
32	32 011	1 5053026	54275400	30 252	1 4807528	58450431	32
33	31 523	1 4986274	54279050	29 791	1 4740779	58454361	33
34	31 056	1 4921516	54282699	29 350	1 4676025	58458292	34
35	30 610	1 4858639	54286349	28 928	1 4613152	58462222	35
36	30 182	1 4797533	54289999	28 524	1 4552050	58466153	36
37	29 772	1 4738101	54293649	28 136	1 4492625	58470083	37
38	29 378	1 4680262	54297298	27 764	1 4434767	58474014	38
39	29 000	1 4623924	54300948	27 406	1 4378453	58477944	39
40	28 636	1 4569015	54304598	27 062	1 4323548	58481875	40
41	28 285	1 4515463	54308248	26 730	1 4270000	58485805	41
42	27 946	1 4463203	54311897	26 410	1 4217744	58489736	42
43	27 620	1 4412174	54315547	26 102	1 4166719	58493666	43
44	27 305	1 4362320	54319197	25 804	1 4116869	58497597	44
45	27 000	1 4313588	54322847	25 516	1 4068141	58501527	45
46	26 705	1 4265930	54326496	25 238	1 4020487	58505458	46
47	26 420	1 4219297	54330146	24 968	1 3973858	58509388	47
48	26 144	1 4173647	54333796	24 707	1 3928212	58513319	48
49	25 876	1 4128941	54337446	24 454	1 3883509	58517249	49
50	25 616	1 4085138	54341095	24 208	1 3839710	58521180	50

Sine of Inclination (1 over)	n = ·015			n = ·017			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1	162·418	2·2106349	·62494913	148·212	2·1708828	·70827568	1
2	114·849	2·0601274	·62499124	104·804	2·0203760	·70832340	2
3	93·775	1·9720893	·62503335	85·573	1·9323386	·70837113	3
4	81·213	1·9096274	·62507546	74·110	1·8698774	·70841886	4
5	72·641	1·8611799	·62511758	66·288	1·8214306	·70846659	5
6	66·313	1·8215968	·62515969	60·513	1·7818483	·70851431	6
7	61·395	1·7881309	·62520180	56·025	1·7483831	·70856204	7
8	57·430	1·7591424	·62524391	52·408	1·7193954	·70860977	8
9	54·147	1·7335736	·62528603	49·411	1·6938273	·70865750	9
10	51·369	1·7107021	·62532814	46·877	1·6709568	·70870522	10
11	48·980	1·6900136	·62537025	44·696	1·6502688	·70875295	11
12	46·895	1·6711268	·62541236	42·794	1·6313827	·70880068	12
13	45·056	1·6537532	·62545448	41·116	1·6140098	·70884841	13
14	43·418	1·6376684	·62549659	39·621	1·5979257	·70889613	14
15	41·946	1·6226943	·62553870	38·278	1·5829523	·70894386	15
16	40·615	1·6086874	·62558081	37·063	1·5689462	·70899159	16
17	39·403	1·5955804	·62562293	35·957	1·5557899	·70903932	17
18	38·294	1·5831261	·62566504	34·945	1·5433863	·70908704	18
19	37·273	1·5713981	·62570715	34·014	1·5316540	·70913477	19
20	36·330	1·5602624	·62574926	33·153	1·5205240	·70918250	20
21	35·455	1·5496753	·62579138	32·354	1·5099377	·70923023	21
22	34·640	1·5395811	·62583349	31·611	1·4998442	·70927795	22
23	33·879	1·5299360	·62587560	30·916	1·4901999	·70932568	23
24	33·167	1·5207018	·62591771	30·267	1·4809664	·70937341	24
25	32·497	1·5118450	·62595983	29·655	1·4721102	·70942114	25
26	31·867	1·5033358	·62600194	29 080	1·4636017	·70946886	26
27	31·271	1·4951481	·62604405	28·537	1·4554147	·70951659	27
28	30·709	1·4872585	·62608616	28·024	1·4475259	·70956432	28
29	30·175	1·4796460	·62612828	27·537	1·4399141	·70961205	29
30	29·668	1·4722919	·62617039	27·075	1·4325607	·70965977	30
31	29·186	1·4651792	·62621250	26·635	1·4254487	·70970750	31
32	28·727	1·4582925	·62625461	26·216	1·4185627	·70975523	32
33	28·289	1·4516180	·62629673	25·816	1·4118890	·70980296	33
34	27·870	1·4451430	·62633884	25·434	1·4054147	·70985068	34
35	27·470	1·4388560	·62638095	25·069	1·3991284	·70989841	35
36	27·086	1·4327462	·62642306	24·719	1·3930193	·70994614	36
37	26·718	1·4268041	·62646518	24·383	1·3870779	·70999387	37
38	26·365	1·4210207	·62650729	24·060	1·3812953	·71004159	38
39	26·025	1·4153877	·62654940	23·750	1·3756630	·71008932	39
40	25·698	1·4098975	·62659151	23·452	1·3701735	·71013705	40
41	25·383	1·4045431	·62663363	23·165	1·3648198	·71018478	41
42	25·079	1·3993179	·62667574	22·888	1·3595953	·71023250	42
43	24·786	1·3942157	·62671785	22·620	1·3544939	·71028023	43
44	24·504	1·3892311	·62675996	22·362	1·3495100	·71032796	44
45	24·231	1·3843587	·62680208	22·112	1·3446383	·71037569	45
46	23·966	1·3795936	·62684419	21·870	1·3398739	·71042341	46
47	23·710	1·3749311	·62688630	21·638	1·3352122	·71047114	47
48	23·462	1·3703669	·62692841	21·412	1·3306487	·71051887	48
49	23·222	1·3658970	·62697053	21·193	1·3261795	·71056660	49
50	22·989	1·3615175	·62701264	20·980	1·3218007	·71061432	50

Sine of Inclination (1 over)	n = 020			n = 0225			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1	132 229	2 1213284	83326550	122 167	2 0869525	93742369	1
2	93 502	1 9708226	83332165	86 387	1 9364475	93748686	2
3	76 346	1 8827862	83337780	70 536	1 8484118	93755003	3
4	66 119	1 8203260	83343395	61 088	1 7859524	93761320	4
5	59 140	1 7718802	83349010	54 639	1 7375074	93767636	5
6	53 988	1 7322989	83354625	49 880	1 6979268	93773953	6
7	49 984	1 6988347	83360240	46 181	1 6644633	93780270	7
8	46 757	1 6698479	83365855	43 199	1 6354773	93786587	8
9	44 084	1 6442808	83371470	40 730	1 6099110	93792904	9
10	41 823	1 6214114	83377085	38 641	1 5870423	93799221	10
11	39 877	1 6007243	83382700	36 843	1 5663559	93805538	11
12	38 180	1 5818392	83388315	35 276	1 5474716	93811855	12
13	36 683	1 5644674	83393930	33 892	1 5301005	93818172	13
14	35 350	1 5483843	83399545	32 660	1 5140182	93824488	14
15	34 152	1 5334119	83405160	31 553	1 4990465	93830805	15
16	33 068	1 5194067	83410775	30 552	1 4850421	93837122	16
17	32 081	1 5062514	83416390	29 641	1 4718876	93843439	17
18	31 178	1 4938488	83422005	28 806	1 4594858	93849756	18
19	30 347	1 4821175	83427620	28 038	1 4477553	93956073	19
20	29 579	1 4709885	83433235	27 329	1 4366270	93862390	20
21	28 867	1 4604032	83438850	26 671	1 4260424	93868706	21
22	28 204	1 4503107	83444465	26 059	1 4159507	93875023	22
23	27 584	1 4406673	83450080	25 486	1 4063081	93881340	23
24	27 004	1 4314348	83455695	24 950	1 3970764	93887657	24
25	26 459	1 4225796	83461310	24 447	1 3882219	93893974	25
26	25 946	1 4140721	83466925	23 973	1 3797152	93900291	26
27	25 461	1 4058862	83472540	23 525	1 3715300	93906608	27
28	25 003	1 3979983	83478155	23 102	1 3636428	93912925	28
29	24 569	1 3903875	83483770	22 700	1 3560328	93919241	29
30	24 156	1 3830351	83489385	22 319	1 3486812	93925558	30
31	23 764	1 3759241	83495000	21 957	1 3415710	93931875	31
32	23 390	1 3690390	83500615	21 612	1 3346868	93938192	32
33	23 034	1 3623664	83506230	21 282	1 3280147	93944509	33
34	22 693	1 3558931	83511845	20 967	1 3215422	93950826	34
35	22 367	1 3496078	83517460	20 666	1 3152577	93957143	35
36	22 054	1 3434997	83523075	20 378	1 3091504	93963460	36
37	21 755	1 3375593	83528690	20 101	1 3032107	93969776	37
38	21 468	1 3318076	83534305	19 835	1 2974298	93976093	38
39	21 191	1 3261463	83539920	19 579	1 2917993	93982410	39
40	20 925	1 3206578	83545535	19 333	1 2863115	93988727	40
41	20 668	1 3153052	83551150	19 096	1 2809596	93995044	41
42	20 421	1 3100917	83556765	18 868	1 2757369	94001361	42
43	20 183	1 3049812	83562380	18 648	1 2706371	94007678	43
44	19 953	1 2999983	83567995	18 436	1 2656550	94013995	44
45	19 730	1 2951276	83573610	18 230	1 2607851	94020311	45
46	19 515	1 2903642	83579225	18 031	1 2560225	94026628	46
47	19 307	1 2857035	83584840	17 839	1 2513625	94032945	47
48	19 105	1 2811410	83590455	17 653	1 2468007	94039262	48
49	18 909	1 2766728	83596070	17 472	1 2423333	94045579	49
50	18 720	1 2722950	83601685	17 296	1 2379563	94051896	50

Sine of Inclination (1 over)	n = ·0250			n = ·0275			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1	114·116	2·0573475	1·0415819	107·530	2·0315281	1·1457401	1
2	80·694	1·9068433	1·0416521	76·037	1·8810245	1·1458173	2
3	65·888	1·8188084	1·0417223	62·086	1·7929902	1·1458945	3
4	57·062	1·7563496	1·0417924	53·769	1·7305322	1·1459717	4
5	51·039	1·7079053	1·0418626	48·093	1·6820885	1·1460489	5
6	46·593	1·6683253	1·0419328	43·904	1·6425092	1·1461261	6
7	43·138	1·6348626	1·0420030	40·649	1·6090470	1·1462033	7
8	40·353	1·6058773	1·0420732	38·024	1·5800625	1·1462805	8
9	38·046	1·5803117	1·0421434	35·850	1·5544975	1·1463577	9
10	36·095	1·5574437	1·0422136	34·012	1·5316302	1·1464349	10
11	34·415	1·5367581	1·0422838	32·430	1·5109452	1·1465121	11
12	32·951	1·5178744	1·0423539	31·050	1·4920622	1·1465893	12
13	31·659	1·5005040	1·0424241	29·833	1·4746925	1·1466665	13
14	30·509	1·4844224	1·0424943	28·748	1·4586115	1·1467437	14
15	29·475	1·4694515	1·0425645	27·774	1·4436412	1·1468210	15
16	28·539	1·4554478	1·0426347	26·893	1·4296382	1·1468982	16
17	27·688	1·4422940	1·0427049	26·090	1·4164850	1·1469754	17
18	26·909	1·4298929	1·0427751	25·356	1·4040846	1·1470526	18
19	26·192	1·4181630	1·0428453	24·680	1·3923554	1·1471298	19
20	25·529	1·4070355	1·0429154	24·056	1·3812286	1·1472070	20
21	24·915	1·3964516	1·0429856	23·477	1·3706453	1·1472842	21
22	24·342	1·3863605	1·0430558	22·938	1·3605549	1·1473614	22
23	23·807	1·3767186	1·0431260	22·434	1·3509136	1·1474386	23
24	23·307	1·3674876	1·0431962	21·962	1·3416833	1·1475158	24
25	22·837	1·3586339	1·0432664	21·519	1·3328302	1·1475930	25
26	22·394	1·3501279	1·0433366	21·102	1·3243248	1·1476702	26
27	21·976	1·3419434	1·0434068	20·708	1·3161409	1·1477474	27
28	21·580	1·3340569	1·0434769	20·335	1·3082552	1·1478246	28
29	21·205	1·3264476	1·0435471	19·982	1·3006465	1·1479018	29
30	20·850	1·3190967	1·0436173	19·647	1·2932963	1·1479790	30
31	20·511	1·3119872	1·0436875	19·328	1·2861874	1·1480563	31
32	20·188	1·3051036	1·0437577	19·024	1·2793045	1·1481335	32
33	19·881	1·2984323	1·0438279	18·734	1·2726338	1·1482107	33
34	19·587	1·2919605	1·0438981	18·457	1·2661627	1·1482879	34
35	19·305	1·2856766	1·0439693	18·191	1·2598795	1·1483651	35
36	19·035	1·2795700	1·0440384	17·938	1·2537735	1·1484423	36
37	18·777	1·2736311	1·0441086	17·694	1·2478353	1·1485195	37
38	18·529	1·2678509	1·0441788	17·460	1·2420557	1·1485967	38
39	18·290	1·2622211	1·0442490	17·236	1·2364265	1·1486739	39
40	18·061	1·2567340	1·0443192	17·019	1·2309402	1·1487511	40
41	17·840	1·2513828	1·0443894	16·811	1·2255896	1·1488283	41
42	17·626	1·2461608	1·0444596	16·610	1·2203682	1·1489055	42
43	17·420	1·2410618	1·0445298	16·416	1·2152698	1·1489827	43
44	17·222	1·2360803	1·0445999	16·229	1·2102890	1·1490599	44
45	17·030	1·2312111	1·0446701	16·048	1·2054204	1·1491371	45
46	16·844	1·2264492	1·0447403	15·873	1·2006592	1·1492143	46
47	16·664	1·2217898	1·0448105	15·704	1·1960005	1·1492916	47
48	16·490	1·2172288	1·0448807	15·540	1·1914401	1·1493688	48
49	16·322	1·2127621	1·0449509	15·381	1·1869740	1·1494460	49
50	16·158	1·2083857	1·0450211	15·226	1·1825984	1·1495232	50

Sine of Inclination (1 over)	n = ·030			n = ·035			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1	102 041	2 0087787	1 2498983	93 415	1 9704185	1 4582146	1
2	72 156	1 8582707	1 2499825	66 057	1 8199166	1 4583129	2
3	58 916	1 7702370	1 2500667	53 937	1 7318840	1 4584112	3
4	51 024	1 7077796	1 2501509	46 712	1 6694277	1 4585094	4
5	45 639	1 6593365	1 2502352	41 782	1 6209857	1 4586077	5
6	41 663	1 6197579	1 2503194	38 142	1 5814081	1 4587059	6
7	38 574	1 5862965	1 2504036	35 314	1 5479478	1 4588042	7
8	36 084	1 5573124	1 2504878	33 034	1 5189649	1 4589025	8
9	34 021	1 5317480	1 2505721	31 146	1 4934016	1 4590007	9
10	32 276	1 5088812	1 2506563	29 549	1 4705360	1 4590990	10
11	30 775	1 4881969	1 2507405	28 174	1 4498527	1 4591973	11
12	29 466	1 4693146	1 2508247	26 976	1 4309715	1 4592955	12
13	28 310	1 4519454	1 2509090	25 918	1 4136034	1 4593938	13
14	27 281	1 4358651	1 2509932	24 976	1 3975242	1 4594920	14
15	26 357	1 4208954	1 2510774	24 130	1 3825556	1 4595903	15
16	25 520	1 4068929	1 2511616	23 364	1 3685542	1 4596886	16
17	24 759	1 3937404	1 2512459	22 667	1 3554028	1 4597868	17
18	24 062	1 3813405	1 2513301	22 029	1 3430040	1 4598851	18
19	23 421	1 3696120	1 2514143	21 443	1 3312766	1 4599834	19
20	22 829	1 3584857	1 2514985	20 900	1 3201514	1 4600816	20
21	22 279	1 3479030	1 2515828	20 397	1 3095699	1 4601799	21
22	21 768	1 3378133	1 2516670	19 929	1 2994812	1 4602781	22
23	21 290	1 3281726	1 2517512	19 491	1 2988417	1 4603764	23
24	20 842	1 3189429	1 2518354	19 082	1 2806130	1 4604747	24
25	20 422	1 3100904	1 2519197	18 697	1 2717616	1 4605729	25
26	20 026	1 3015856	1 2520039	18 334	1 2632580	1 4606712	26
27	19 652	1 2934024	1 2520881	17 992	1 2550758	1 4607695	27
28	19 298	1 2855172	1 2521723	17 668	1 2471918	1 4608677	28
29	18 963	1 2779092	1 2522566	17 361	1 2395848	1 4609660	29
30	18 645	1 2705595	1 2523408	17 070	1 2322363	1 4610642	30
31	18 342	1 2634513	1 2524250	16 793	1 2251291	1 4611625	31
32	18 054	1 2565690	1 2525092	16 529	1 2182479	1 4612608	32
33	17 779	1 2498989	1 2525935	16 277	1 2115790	1 4613590	33
34	17 516	1 2434284	1 2526777	16 037	1 2051089	1 4614573	34
35	17 264	1 2371458	1 2527619	15 806	1 1988281	1 4615556	35
36	17 022	1 2310405	1 2528461	15 586	1 1927238	1 4616538	36
37	16 792	1 2251028	1 2529304	15 374	1 1867872	1 4617521	37
38	16 570	1 2193238	1 2530146	15 171	1 1810094	1 4618503	38
39	16 357	1 2136953	1 2530988	14 976	1 1753819	1 4619486	39
40	16 151	1 2082095	1 2531830	14 788	1 1698972	1 4620469	40
41	15 953	1 2028596	1 2532673	14 607	1 1645483	1 4621541	41
42	15 763	1 1976388	1 2533515	14 432	1 1593287	1 4622434	42
43	15 579	1 1925410	1 2534357	14 264	1 1542321	1 4623417	43
44	15 402	1 1875609	1 2535199	14 101	1 1492530	1 4624399	44
45	15 230	1 1826929	1 2536042	13 944	1 1443861	1 4625382	45
46	15 064	1 1779322	1 2536884	13 792	1 1396266	1 4626364	46
47	14 903	1 1732742	1 2537726	13 645	1 1349696	1 4627347	47
48	14 747	1 1687144	1 2538568	13 502	1 1304110	1 4628330	48
49	14 596	1 1642489	1 2539411	13 364	1 1259466	1 4629312	49
50	14 450	1 1598738	1 2540253	13 230	1 1215726	1 4630295	50

Sine of Inclination (1 over)	n = ·050			Sine of Inclination (1 over)	n = ·009		
	N	log. N	D		N	log. N	D
1	77·890	1·8914804	2·0831638	51	34·036	1·5319319	·37623285
2	55·079	1·7409811	2·0833041	52	33·707	1·5277203	·37625812
3	44·973	1·6529512	2·0834445	53	33·388	1·5235890	·37628339
4	38·949	1·5904974	2·0835849	54	33·077	1·5195351	·37630865
5	34·838	1·5420580	2·0837253	55	32·776	1·5155557	·37633392
6	31·804	1·5024831	2·0838656	56	32·482	1·5116480	·37635919
7	29·446	1·4690254	2·0840060	57	32·196	1·5078095	·37638446
8	27·545	1·4400450	2·0841464	58	31·919	1·5040379	·37640972
9	25·971	1·4144844	2·0842868	59	31·647	1·5003309	·37643499
10	24·639	1·3916213	2·0844271	60	31·382	1·4966863	·37646026
11	23·493	1·3709407	2·0845675	61	31·125	1·4931022	·37648553
12	22·494	1·3520620	2·0847079	62	30·873	1·4895763	·37651079
13	21·612	1·3346965	2·0848483	63	30·627	1·4861069	·37653606
14	20·827	1·3186199	2·0849886	64	30·387	1·4826922	·37656133
15	20·121	1·3036540	2·0851290	65	30·153	1·4793306	·37658660
16	19·483	1·2896552	2·0852694	66	29·924	1·4760203	·37661186
17	18·902	1·2765063	2·0854098	67	29·700	1·4727598	·37663713
18	18·370	1·2641102	2·0855501	68	29·481	1·4695477	·37666240
19	17·881	1·2523853	2·0856905	69	29·267	1·4663827	·37668767
20	17·429	1·2412628	2·0858309	70	29·058	1·4632633	·37671293
21	17·009	1·2306838	2·0859713	71	28·853	1·4601882	·37673820
22	16·619	1·2205977	2·0861116	72	28·652	1·4571561	·37676347
23	16·255	1·2109608	2·0862520	73	28·455	1·4541659	·37678874
24	15·912	1·2017347	2·0863924	74	28·263	1·4512164	·37681400
25	15·591	1·1928860	2·0865328	75	28·074	1·4483067	·37683927
26	15·289	1·1843849	2·0866731	76	27·889	1·4454355	·37686454
27	15·004	1·1762053	2·0868135	77	27·708	1·4426019	·37688981
28	14·734	1·1683239	2·0869539	78	27·530	1·4398050	·37691507
29	14·478	1·1607196	2·0870943	79	27·355	1·4370437	·37694034
30	14·236	1·1533736	2·0872346	80	27·184	1·4343173	·37696561
31	14·005	1·1462690	2·0873750	81	27·016	1·4316249	·37699088
32	13·785	1·1393904	2·0875154	82	26·851	1·4289656	·37701614
33	13·575	1·1327241	2·0876558	83	26·689	1·4263385	·37704141
34	13·374	1·1262572	2·0877961	84	26·530	1·4237429	·37706668
35	13·182	1·1199784	2·0879365	85	26·374	1·4211781	·37709195
36	12·998	1·1138767	2·0880769	86	26·221	1·4186433	·37711721
37	12·822	1·1079427	2·0882173	87	26·070	1·4161380	·37714248
38	12·652	1·1021675	2·0883576	88	25·922	1·4136613	·37716775
39	12·489	1·0965426	2·0884980	89	25·776	1·4112126	·37719302
40	12·333	1·0910605	2·0886384	90	25·633	1·4087913	·37721828
41	12·182	1·0857142	2·0887788	91	25·492	1·4063969	·37724355
42	12·036	1·0804972	2·0889191	92	25·353	1·4040287	·37726882
43	11·896	1·0754031	2·0890595	93	25·217	1·4016862	·37729409
44	11·761	1·0704266	2·0891999	94	25·082	1·3993687	·37731935
45	11·630	1·0655624	2·0893403	95	24·950	1·3970759	·37734462
46	11·503	1·0608054	2·0894806	96	24·820	1·3948071	·37736989
47	11·380	1·0561511	2·0896210	97	24·692	1·3925618	·37739516
48	11·262	1·0515950	2·0897614	98	24·566	1·3903397	·37742042
49	11·146	1·0471332	2·0899018	99	24·442	1·3881401	·37744569
50	11·035	1·0427618	2·0900421	100	24·320	1·3859627	·37747096

Sine of Inclination (1 over)	n = ·010			n = ·011			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
51	31 217	1 4943953	41803650	28 912	1 4610709	45981015	51
52	30 916	1 4901842	41806458	28 633	1 4568602	45987103	52
53	30 623	1 4860534	41809265	29 361	1 4527298	45990192	53
54	30 339	1 4820000	41812073	28 098	1 4486768	45993280	54
55	30 062	1 4780210	41814880	27 841	1 4446983	45996368	55
56	29 793	1 4741133	41817688	27 593	1 4407915	45999456	56
57	29 531	1 4702758	41820495	27 350	1 4369539	46002545	57
58	29 277	1 4665047	41823303	27 113	1 4331832	46005633	58
59	29 027	1 4627981	41826110	26 883	1 4294771	46008721	59
60	28 784	1 4591540	41828918	26 658	1 4258334	46011809	60
61	28 548	1 4555701	41831725	26 439	1 4222500	46014898	61
62	28 317	1 4520447	41834533	26 225	1 4187250	46017986	62
63	28 092	1 4485757	41837340	26 017	1 4152565	46021074	63
64	27 872	1 4451615	41840148	25 813	1 4118428	46024162	64
65	27 657	1 4418003	41842955	25 614	1 4084820	46027251	65
66	27 447	1 4384905	41845763	25 420	1 4051726	46030339	66
67	27 242	1 4352304	41848570	25 230	1 4019130	46033427	67
68	27 041	1 4320188	41851378	25 044	1 3987018	46036515	68
69	26 845	1 4288543	41854185	24 862	1 3955377	46039604	69
70	26 652	1 4257354	41856993	24 684	1 3924192	46042692	70
71	26 464	1 4226607	41859800	24 510	1 3893449	46045780	71
72	26 280	1 4196291	41862608	24 340	1 3863137	46048868	72
73	26 100	1 4166394	41865415	24 172	1 3833244	46051957	73
74	25 923	1 4136903	41868223	24 009	1 3803758	46055045	74
75	25 750	1 4107811	41871030	23 849	1 3774671	46058133	75
76	25 581	1 4079103	41873838	23 692	1 3745969	46061221	76
77	25 414	1 4050772	41876645	23 538	1 3717642	46064310	77
78	25 251	1 4022808	41879453	23 386	1 3689682	46067398	78
79	25 091	1 3995200	41882260	23 239	1 3662078	46070486	79
80	24 934	1 3967940	41885068	23 093	1 3634822	46073574	80
81	24 780	1 3941020	41887875	22 950	1 3607906	46076663	81
82	24 629	1 3914430	41890683	22 811	1 3581321	46079751	82
83	24 480	1 3888164	41893490	22 673	1 3555059	46082839	83
84	24 334	1 3862213	41896298	22 538	1 3529112	46085927	84
85	24 191	1 3836570	41899105	22 405	1 3503473	46089016	85
86	24 050	1 3811226	41901913	22 275	1 3478134	46092104	86
87	23 912	1 3786177	41904720	22 147	1 3453089	46095192	87
88	23 776	1 3761415	41907528	22 021	1 3428331	46098280	88
89	23 642	1 3736932	41910335	21 897	1 3403854	46101369	89
90	23 511	1 3712724	41913143	21 775	1 3379650	46104457	90
91	23 381	1 3688784	41915950	21 656	1 3355714	46107545	91
92	23 255	1 3665107	41918758	21 538	1 3332041	46110633	92
93	23 129	1 3641686	41921565	21 422	1 3308624	46113722	93
94	23 006	1 3618515	41924373	21 308	1 3285458	46116810	94
95	22 885	1 3595592	41927180	21 196	1 3262539	46119888	95
96	22 766	1 3572909	41929988	21 085	1 3239860	46122976	96
97	22 649	1 3550461	41932795	20 977	1 3217416	46126065	97
98	22 533	1 3528244	41935603	20 870	1 3195204	46129153	98
99	22 419	1 3506253	41938410	20 764	1 3173217	46132241	99
100	22 307	1 3484483	41941218	20 661	1 3151452	46135329	100

Sine of Inclination (1 over)	n = ·050			Sine of Inclination (1 over)	n = ·009		
	N	log. N	D		N	log. N	D
1	77·890	1·8914804	2·0831638	51	34·036	1·5319319	·37623285
2	55·079	1·7409811	2·0833041	52	33·707	1·5277203	·37625812
3	44·973	1·6529512	2·0834445	53	33·388	1·5235890	·37628339
4	38·949	1·5904974	2·0835849	54	33·077	1·5195351	·37630865
5	34·838	1·5420580	2·0837253	55	32·776	1·5155557	·37633392
6	31·804	1·5024831	2·0838656	56	32·482	1·5116480	·37635919
7	29·446	1·4690254	2·0840060	57	32·196	1·5078095	·37638446
8	27·545	1·4400450	2·0841464	58	31·919	1·5040379	·37640972
9	25·971	1·4144844	2·0842868	59	31·647	1·5003309	·37643499
10	24·639	1·3916213	2·0844271	60	31·382	1·4966863	·37646026
11	23·493	1·3709407	2·0845675	61	31·125	1·4931022	·37648553
12	22·494	1·3520620	2·0847079	62	30·873	1·4895763	·37651079
13	21·612	1·3346965	2·0848483	63	30·627	1·4861069	·37653606
14	20·827	1·3186199	2·0849886	64	30·387	1·4826922	·37656133
15	20·121	1·3036540	2·0851290	65	30·153	1·4793306	·37658660
16	19·483	1·2896552	2·0852694	66	29·924	1·4760203	·37661186
17	18·902	1·2765063	2·0854098	67	29·700	1·4727598	·37663713
18	18·370	1·2641102	2·0855501	68	29·481	1·4695477	·37666240
19	17·881	1·2523853	2·0856905	69	29·267	1·4663827	·37668767
20	17·429	1·2412628	2·0858309	70	29·058	1·4632633	·37671293
21	17·009	1·2306838	2·0859713	71	28·853	1·4601882	·37673820
22	16·619	1·2205977	2·0861116	72	28·652	1·4571561	·37676347
23	16·255	1·2109608	2·0862520	73	28·455	1·4541659	·37678874
24	15·912	1·2017347	2·0863924	74	28·263	1·4512164	·37681400
25	15·591	1·1928860	2·0865328	75	28·074	1·4483067	·37683927
26	15·289	1·1843849	2·0866731	76	27·889	1·4454355	·37686454
27	15·004	1·1762053	2·0868135	77	27·708	1·4426019	·37688981
28	14·734	1·1683239	2·0869539	78	27·530	1·4398050	·37691507
29	14·478	1·1607196	2·0870943	79	27·355	1·4370437	·37694034
30	14·236	1·1533736	2·0872346	80	27·184	1·4343173	·37696561
31	14·005	1·1462690	2·0873750	81	27·016	1·4316249	·37699088
32	13·785	1·1393904	2·0875154	82	26·851	1·4289656	·37701614
33	13·575	1·1327241	2·0876558	83	26·689	1·4263385	·37704141
34	13·374	1·1262572	2·0877961	84	26·530	1·4237429	·37706668
35	13·182	1·1199784	2·0879365	85	26·374	1·4211781	·37709195
36	12·998	1·1138767	2·0880769	86	26·221	1·4186433	·37711721
37	12·822	1·1079427	2·0882173	87	26·070	1·4161380	·37714248
38	12·652	1·1021675	2·0883576	88	25·922	1·4136613	·37716775
39	12·489	1·0965426	2·0884980	89	25·776	1·4112126	·37719302
40	12·333	1·0910605	2·0886384	90	25·633	1·4087913	·37721828
41	12·182	1·0857142	2·0887788	91	25·492	1·4063969	·37724355
42	12·036	1·0804972	2·0889191	92	25·353	1·4040287	·37726882
43	11·896	1·0754031	2·0890595	93	25·217	1·4016862	·37729409
44	11·761	1·0704266	2·0891999	94	25·082	1·3993687	·37731935
45	11·630	1·0655624	2·0893403	95	24·950	1·3970759	·37734462
46	11·503	1·0608054	2·0894806	96	24·820	1·3948071	·37736989
47	11·380	1·0561511	2·0896210	97	24·692	1·3925618	·37739516
48	11·262	1·0515950	2·0897614	98	24·566	1·3903397	·37742042
49	11·146	1·0471332	2·0899018	99	24·442	1·3881401	·37744569
50	11·035	1·0427618	2·0900421	100	24·320	1·3859627	·37747096

Sine of Inclination 1 over	n = 010			n = 011			Sine of Inclination 1 over
	N	log N	D	N	log N	D	
51	31 217	1 4943953	41803650	28 912	1 4610709	45984015	51
52	30 916	1 4901842	41806458	28 633	1 4568602	45987103	52
53	30 623	1 4860534	41809265	28 361	1 4527298	45990192	53
54	30 339	1 4820000	41812073	28 098	1 4486768	45993280	54
55	30 062	1 4780210	41814880	27 841	1 4446983	45996368	55
56	29 793	1 4741138	41817688	27 593	1 4407915	45999456	56
57	29 531	1 4702758	41820495	27 350	1 4369539	46002545	57
58	29 277	1 4665047	41823303	27 113	1 4331832	46005633	58
59	29 027	1 4627981	41826110	26 883	1 4294771	46008721	59
60	28 784	1 4591540	41828918	26 658	1 4258334	46011809	60
61	28 548	1 4555701	41831725	26 439	1 4222500	46014898	61
62	28 317	1 4520447	41834533	26 225	1 4187250	46017986	62
63	28 092	1 4485757	41837340	26 017	1 4152565	46021074	63
64	27 872	1 4451615	41840148	25 813	1 4118428	46024162	64
65	27 657	1 4418003	41842955	25 614	1 4084820	46027251	65
66	27 447	1 4384905	41845763	25 420	1 4051726	46030339	66
67	27 242	1 4352304	41848570	25 230	1 4019130	46033427	67
68	27 041	1 4320188	41851378	25 044	1 3987018	46036515	68
69	26 845	1 4288543	41854185	24 862	1 3955377	46039604	69
70	26 652	1 4257354	41856993	24 684	1 3924192	46042692	70
71	26 464	1 4226607	41859800	24 510	1 3893449	46045780	71
72	26 280	1 4196291	41862608	24 340	1 3863137	46048868	72
73	26 100	1 4166394	41865415	24 172	1 3833244	46051957	73
74	25 923	1 4136903	41868223	24 009	1 3803758	46055045	74
75	25 750	1 4107811	41871030	23 849	1 3774671	46058133	75
76	25 581	1 4079103	41873838	23 692	1 3745969	46061221	76
77	25 414	1 4050772	41876645	23 538	1 3717642	46064310	77
78	25 251	1 4022808	41879453	23 386	1 3689682	46067398	78
79	25 091	1 3995200	41882260	23 239	1 3662078	46070486	79
80	24 934	1 3967940	41885068	23 093	1 3634822	46073574	80
81	24 780	1 3941020	41887875	22 950	1 3607906	46076663	81
82	24 629	1 3914430	41890683	22 811	1 3581321	46079751	82
83	24 480	1 3888164	41893490	22 673	1 3555059	46082839	83
84	24 334	1 3862213	41896298	22 538	1 3529112	46085927	84
85	24 191	1 3836570	41899105	22 405	1 3503473	46089016	85
86	24 050	1 3811226	41901913	22 275	1 3478134	46092104	86
87	23 912	1 3786177	41904720	22 147	1 3453089	46095192	87
88	23 776	1 3761415	41907528	22 021	1 3428331	46098280	88
89	23 642	1 3736932	41910335	21 897	1 3403854	46101369	89
90	23 511	1 3712724	41913143	21 775	1 3379650	46104457	90
91	23 381	1 3688784	41915950	21 656	1 3355714	46107545	91
92	23 253	1 3665107	41918758	21 538	1 3332041	46110633	92
93	23 129	1 3641686	41921565	21 422	1 3308624	46113722	93
94	23 006	1 3618515	41924373	21 308	1 3285458	46116810	94
95	22 885	1 3595592	41927180	21 196	1 3262539	46119898	95
96	22 766	1 3572909	41929988	21 085	1 3239860	46122976	96
97	22 649	1 3550461	41932795	20 977	1 3217416	46126065	97
98	22 534	1 3528244	41935603	20 870	1 3195204	46129153	98
99	22 419	1 3506253	41938410	20 764	1 3173217	46132241	99
100	22 307	1 3484483	41941218	20 661	1 3151452	46135329	100

Sine of Inclination (1 over)	n = ·012			n = ·013			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
51	26·990	1·4312035	·50164380	25·364	1·4042205	·54344745	51
52	26·730	1·4269932	·50167749	25·120	1·4000106	·54348395	52
53	26·477	1·4228632	·50171118	24·882	1·3958810	·54352045	53
54	26·231	1·4188106	·50174487	24·651	1·3918288	·54355694	54
55	25·992	1·4148325	·50177856	24·426	1·3878511	·54359344	55
56	25·759	1·4109261	·50181225	24·207	1·3839452	·54362994	56
57	25·532	1·4070889	·50184594	23·994	1·3801084	·54366644	57
58	25·312	1·4033187	·50187963	23·787	1·3763385	·54370293	58
59	25·096	1·3996130	·50191332	23·585	1·3726333	·54373943	59
60	24·887	1·3959697	·50194701	23·388	1·3689904	·54377593	60
61	24·682	1·3923867	·50198070	23·196	1·3654079	·54381243	61
62	24·483	1·3888621	·50201439	23·008	1·3618837	·54384892	62
63	24·288	1·3853941	·50204808	22·825	1·3584160	·54388542	63
64	24·098	1·3819808	·50208177	22·647	1·3550031	·54392192	64
65	23·912	1·3786204	·50211546	22·472	1·3516431	·54395842	65
66	23·731	1·3753114	·50214915	22·302	1·3483345	·54399491	66
67	23·554	1·3720522	·50218284	22·135	1·3450757	·54403141	67
68	23·380	1·3688414	·50221653	21·972	1·3418653	·54406791	68
69	23·210	1·3656778	·50225022	21·812	1·3387020	·54410441	69
70	23·044	1·3625596	·50228391	21·656	1·3355844	·54414090	70
71	22·882	1·3594859	·50231760	21·504	1·3325110	·54417740	71
72	22·722	1·3564552	·50235129	21·354	1·3294807	·54421390	72
73	22·566	1·3534663	·50238498	21·208	1·3264922	·54425040	73
74	22·414	1·3505181	·50241867	21·064	1·3235444	·54428690	74
75	22·264	1·3476097	·50245236	20·924	1·3206365	·54432340	75
76	22·118	1·3447399	·50248605	20·786	1·3177670	·54435989	76
77	21·974	1·3419076	·50251974	20·651	1·3149352	·54439639	77
78	21·833	1·3391120	·50255343	20·518	1·3121400	·54443288	78
79	21·695	1·3363521	·50258712	20·388	1·3093805	·54446938	79
80	21·559	1·3336269	·50262081	20·261	1·3066557	·54450588	80
81	21·426	1·3309358	·50265450	20·135	1·3039649	·54454238	81
82	21·295	1·3282777	·50268819	20·013	1·3013072	·54457887	82
83	21·167	1·3256519	·50272188	19·892	1·2986819	·54461537	83
84	21·041	1·3230576	·50275557	19·774	1·2960880	·54465187	84
85	20·917	1·3204941	·50278926	19·657	1·2935250	·54468837	85
86	20·795	1·3179607	·50282295	19·543	1·2909919	·54472586	86
87	20·675	1·3154566	·50285664	19·431	1·2884882	·54476236	87
88	20·558	1·3129812	·50289033	19·320	1·2860132	·54479886	88
89	20·443	1·3105338	·50292402	19·211	1·2835662	·54483536	89
90	20·329	1·3081138	·50295771	19·105	1·2811467	·54487185	90
91	20·217	1·3057207	·50299140	19·000	1·2787540	·54490835	91
92	20·107	1·3033539	·50302509	18·896	1·2763875	·54494485	92
93	19·999	1·3010127	·50305878	18·795	1·2740467	·54498135	93
94	19·893	1·2986965	·50309247	18·695	1·2717309	·54501784	94
95	19·788	1·2964050	·50312616	18·597	1·2694398	·54505434	95
96	19·685	1·2941375	·50315985	18·500	1·2671728	·54509084	96
97	19·583	1·2918935	·50319354	18·405	1·2649292	·54512734	97
98	19·483	1·2896728	·50322723	18·311	1·2627088	·54516383	98
99	19·385	1·2874745	·50326092	18·218	1·2605109	·54520033	99
100	19·289	1·2852984	·50329461	18·127	1·2583352	·54523683	100

Sine of Inclination (1 over	n = ·014			n = ·015			Sine of Inclination 1 over
	N	log N	D	N	log N	D	
51	23 982	1 3796781	58525110	22 763	1 3572249	62705475	51
52	23 740	1 3754686	58529041	22 543	1 3530158	62709686	52
53	23 515	1 3713394	58532971	22 330	1 3488870	62713898	53
54	23 296	1 3672876	58536902	22 123	1 3448356	62718109	54
55	23 084	1 3633103	58540832	21 921	1 3408587	62722320	55
56	22 878	1 3594048	58544763	21 725	1 3369535	62726531	56
57	22 676	1 3555684	58548693	21 534	1 3331175	62730743	57
58	22 480	1 3517989	58552624	21 352	1 3294484	62734954	58
59	22 289	1 3480940	58556554	21 171	1 3257439	62739165	59
60	22 103	1 3444515	58560485	20 995	1 3221018	62743376	60
61	21 921	1 3408694	58564415	20 822	1 3185200	62747588	61
62	21 745	1 3373456	58568346	20 653	1 3149966	62751799	62
63	21 571	1 3338783	58572276	20 485	1 3114297	62756010	63
64	21 402	1 3 04657	58576207	20 324	1 3080175	62760221	64
65	21 238	1 3271061	58580137	20 167	1 3046583	62764433	65
66	21 076	1 3237979	58584068	20 015	1 3013503	62768644	66
67	20 919	1 3205396	58587998	19 865	1 2980925	62772855	67
68	20 765	1 3173296	58591929	19 719	1 2948829	62777066	68
69	20 614	1 3141667	58595859	19 576	1 2917204	62781278	69
70	20 467	1 3110491	58599790	19 436	1 2886035	62785489	70
71	20 323	1 3079765	58603720	19 299	1 2855309	62789700	71
72	20 181	1 3049465	58607650	19 165	1 2825018	62793911	72
73	20 043	1 3019584	58611581	19 033	1 2795136	62798123	73
74	19 907	1 2990110	58615512	18 905	1 2766666	62802334	74
75	19 774	1 2961035	58619442	18 778	1 2738594	62806545	75
76	19 644	1 2932344	58623373	18 655	1 2707907	62810756	76
77	19 517	1 2904029	58627303	18 534	1 2679596	62814968	77
78	19 391	1 2876081	58631234	18 415	1 2651652	62819179	78
79	19 269	1 2848490	58635164	18 298	1 2624065	62823390	79
80	19 148	1 2821247	58639095	18 184	1 2596825	62827601	80
81	19 030	1 2794343	58643025	18 072	1 2569925	62831813	81
82	18 914	1 2767770	58646955	17 961	1 2543356	62836024	82
83	18 800	1 2741520	58650886	17 853	1 2517110	62840235	83
84	18 688	1 2715585	58654817	17 747	1 2491179	62844446	84
85	18 578	1 2689959	58658747	17 642	1 2465556	62848658	85
86	18 470	1 2664632	58662678	17 540	1 2440233	62852869	86
87	18 364	1 2639599	58666608	17 439	1 2415204	62857080	87
88	18 260	1 2614853	58670539	17 340	1 2390462	62861291	88
89	18 157	1 2590387	58674469	17 243	1 2366000	62865503	89
90	18 056	1 2566195	58678400	17 147	1 2341812	62869714	90
91	17 957	1 2542272	58682330	17 053	1 2317893	62873925	91
92	17 859	1 2518611	58686261	16 960	1 2294236	62878136	92
93	17 763	1 2495207	58690191	16 869	1 2270835	62882348	93
94	17 669	1 2472053	58694122	16 779	1 2247685	62886559	94
95	17 576	1 2449146	58698052	16 691	1 2224782	62890770	95
96	17 484	1 2426479	58701983	16 604	1 2202119	62894981	96
97	17 394	1 2404047	58705913	16 519	1 2179691	62899193	97
98	17 306	1 2381847	58709844	16 434	1 2157495	62903404	98
99	17 218	1 2359873	58713774	16 351	1 2135524	62907615	99
100	17 132	1 2338120	58717705	16 270	1 2113775	62911826	100

Sine of Inclination (1 over)	n = ·017			n = ·020			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
51	20·774	1·3175088	·71066205	18·536	1·2680041	·83607300	51
52	20·574	1·3133005	·71070978	18·357	1·2637967	·83612915	52
53	20·378	1·3091724	·71075751	18·183	1·2596696	·83618530	53
54	20·189	1·3051217	·71080523	18·014	1·2556199	·83624145	54
55	20·005	1·3011455	·71085296	17·850	1·2516447	·83629760	55
56	19·826	1·2972410	·71090069	17·691	1·2477412	·83635375	56
57	19·652	1·2934058	·71094842	17·535	1·2439069	·83640990	57
58	19·482	1·2896374	·71099614	17·384	1·2401396	·83646605	58
59	19·317	1·2859336	·71104387	17·236	1·2364367	·83652220	59
60	19·156	1·2822922	·71109160	17·092	1·2327964	·83657835	60
61	18·998	1·2787111	·71113933	16·952	1·2292163	·83663450	61
62	18·845	1·2751884	·71118705	16·815	1·2256946	·83669065	62
63	18·695	1·2717222	·71123478	16·681	1·2222294	·83674680	63
64	18·549	1·2683107	·71128251	16·551	1·2188189	·83680295	64
65	18·406	1·2649523	·71133024	16·423	1·2154614	·83685910	65
66	18·266	1·2616452	·71137796	16·299	1·2121553	·83691525	66
67	18·130	1·2583879	·71142569	16·177	1·2088991	·83697140	67
68	17·996	1·2551790	·71147342	16·058	1·2056911	·83702755	68
69	17·866	1·2520173	·71152115	15·942	1·2025304	·83708370	69
70	17·738	1·2489011	·71156887	15·828	1·1994151	·83713985	70
71	17·613	1·2458292	·71161660	15·716	1·1963443	·83719600	71
72	17·491	1·2428003	·71166433	15·607	1·1933164	·83725215	72
73	17·371	1·2398133	·71171206	15·500	1·1903304	·83730830	73
74	17·253	1·2368670	·71175978	15·395	1·1873851	·83736445	74
75	17·138	1·2339605	·71180751	15·293	1·1844796	·83742060	75
76	17·025	1·2310926	·71185524	15·192	1·1816126	·83747675	76
77	16·915	1·2282622	·71190297	15·093	1·1787832	·83753290	77
78	16·806	1·2254685	·71195069	14·997	1·1759905	·83758905	78
79	16·700	1·2227105	·71199842	14·902	1·1732335	·83764520	79
80	16·595	1·2199872	·71204615	14·809	1·1705112	·83770135	80
81	16·493	1·2172979	·71209388	14·717	1·1678229	·83775750	81
82	16·392	1·2146417	·71214160	14·627	1·1651677	·83781365	82
83	16·294	1·2120179	·71218933	14·539	1·1625448	·83786980	83
84	16·197	1·2094255	·71223706	14·453	1·1599534	·83792595	84
85	16·101	1·2068639	·71228479	14·368	1·1573928	·83798210	85
86	16·008	1·2043323	·71233251	14·284	1·1548622	·83803825	86
87	15·916	1·2018301	·71238024	14·202	1·1523610	·83809440	87
88	15·826	1·1993576	·71242797	14·122	1·1498885	·83815055	88
89	15·737	1·1969111	·71247570	14·043	1·1474440	·83820670	89
90	15·649	1·1944930	·71252342	13·965	1·1450269	·83826285	90
91	15·563	1·1921019	·71257115	13·888	1·1426368	·83831900	91
92	15·479	1·1897369	·71261888	13·813	1·1402728	·83837515	92
93	15·396	1·1873975	·71266661	13·738	1·1379344	·83843130	93
94	15·314	1·1850832	·71271433	13·665	1·1356211	·83848745	94
95	15·233	1·1827936	·71276206	13·594	1·1333325	·83854360	95
96	15·154	1·1805280	·71280979	13·523	1·1310679	·83859975	96
97	15·076	1·1782859	·71285752	13·453	1·1288268	·83865590	97
98	14·999	1·1760671	·71290524	13·385	1·1266089	·83871205	98
99	14·924	1·1738707	·71295297	13·317	1·1244135	·83876820	99
100	14·849	1·1716965	·71300070	13·251	1·1222403	·83882435	100

Sine of Inclination (1 over	n = 0225			n = 0250			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
51	17 126	1 2336661	94058213	15 999	1 2040963	1 0450913	51
52	16 961	1 2294595	94064530	15 845	1 1998901	1 0451614	52
53	16 801	1 2253331	94070846	15 695	1 1957648	1 0452316	53
54	16 645	1 2212842	94077163	15 550	1 1917165	1 0453018	54
55	16 493	1 2173098	94083480	15 408	1 1877428	1 0453720	55
56	16 346	1 2134070	94089797	15 270	1 1838408	1 0454422	56
57	16 202	1 2095735	94096114	15 136	1 1800079	1 0455124	57
58	16 062	1 2058069	94102431	15 005	1 1762420	1 0455826	58
59	15 926	1 2021048	94108748	14 878	1 1725407	1 0456528	59
60	15 793	1 1984652	94115065	14 754	1 1689017	1 0457229	60
61	15 663	1 1948859	94121381	14 633	1 1653231	1 0457931	61
62	15 537	1 1913650	94127698	14 515	1 1618029	1 0458633	62
63	15 414	1 1879005	94134015	14 399	1 1583391	1 0459335	63
64	15 293	1 1844908	94140332	14 287	1 1549301	1 0460037	64
65	15 175	1 1811341	94146649	14 177	1 1515741	1 0460739	65
66	15 060	1 1778287	94152966	14 069	1 1482694	1 0461441	66
67	14 948	1 1745732	94159283	13 964	1 1450146	1 0462143	67
68	14 838	1 1713660	94165600	13 861	1 1418082	1 0462844	68
69	14 730	1 1682060	94171916	13 761	1 1386489	1 0463546	69
70	14 625	1 1650916	94178233	13 663	1 1355351	1 0464248	70
71	14 522	1 1620214	94184550	13 566	1 1324657	1 0464950	71
72	14 421	1 1589943	94190867	13 472	1 1294392	1 0465652	72
73	14 322	1 1560091	94197184	13 380	1 1264547	1 0466354	73
74	14 225	1 1530645	94203501	13 290	1 1235109	1 0467056	74
75	14 131	1 1501598	94209818	13 201	1 1206069	1 0467758	75
76	14 038	1 1472936	94216135	13 114	1 1177413	1 0468459	76
77	13 947	1 1444649	94222451	13 029	1 1149134	1 0469161	77
78	13 857	1 1416730	94228768	12 946	1 1121222	1 0469863	78
79	13 769	1 1389167	94235085	12 864	1 1093666	1 0470565	79
80	13 683	1 1361952	94241402	12 783	1 1066458	1 0471267	80
81	13 599	1 1335077	94247719	12 705	1 1039590	1 0471969	81
82	13 516	1 1308531	94254036	12 627	1 1013052	1 0472671	82
83	13 435	1 1282311	94260353	12 551	1 0986838	1 0473373	83
84	13 355	1 1256405	94266670	12 477	1 0960939	1 0474074	84
85	13 276	1 1230806	94272986	12 403	1 0935347	1 0474776	85
86	13 199	1 1205508	94279303	12 331	1 0910056	1 0475478	86
87	13 124	1 1180503	94285620	12 261	1 0885059	1 0476180	87
88	13 049	1 1155786	94291937	12 191	1 0860348	1 0476882	88
89	12 976	1 1131349	94298254	12 123	1 0835917	1 0477584	89
90	12 904	1 1107185	94304571	12 055	1 0811761	1 0478286	90
91	12 833	1 1083291	94310888	11·989	1 0787874	1 0478988	91
92	12 763	1 1059659	94317215	11·924	1 0764248	1 0479689	92
93	12 695	1 1036282	94323521	11 860	1 0740879	1 0480391	93
94	12 628	1 1013157	94329838	11 797	1 0717761	1 0481093	94
95	12 561	1 0990278	94336155	11·735	1 0694889	1 0481795	95
96	12 496	1 0967640	94342472	11 674	1 0672258	1 0482497	96
97	12 432	1·0945236	94348789	11 614	1 0649862	1 0483199	97
98	12 368	1·0923065	94355106	11 555	1 0627697	1 0483901	98
99	12 306	1·0901119	94361423	11 497	1·0605758	1·0484603	99
100	12·245	1 0879394	94367740	11 440	1·0584040	1 0485304	100

Sine of Inclination (1 over)	n = ·0275			n = ·030			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
51	15·112	1·1783096	1·1496004	14·308	1·1555857	1·2541095	51
52	14·932	1·1741043	1·1496776	14·170	1·1513810	1·2541937	52
53	14.790	1·1699794	1·1497548	14·036	1·1472566	1·2542780	53
54	14·653	1·1659318	1·1498320	13·906	1·1432097	1·2543622	54
55	14·520	1·1619587	1·1499092	13·780	1·1392372	1·2544464	55
56	14·390	1·1580574	1·1499864	13·656	1·1353365	1·2545306	56
57	14·264	1·1542252	1·1500636	13·536	1·1315049	1·2546149	57
58	14·140	1·1504599	1·1501408	13·420	1·1277402	1·2546991	58
59	14·020	1·1467592	1·1502180	13·306	1·1240401	1·2547833	59
60	13·903	1·1431209	1·1502952	13·195	1·1204024	1·2548675	60
61	13·789	1·1395429	1·1503724	13·087	1·1168251	1·2549518	61
62	13·678	1·1360233	1·1504496	12·981	1·1133061	1·2550360	62
63	13·569	1·1325603	1·1505269	12·878	1·1098436	1·2551202	63
64	13·463	1·1291519	1·1506041	12·777	1·1064359	1·2552044	64
65	13·360	1·1257965	1·1506813	12·679	1·1030811	1·2552887	65
66	13·258	1·1224926	1·1507585	12·583	1·0997778	1·2553729	66
67	13·160	1·1192384	1·1508357	12·489	1·0965242	1·2554571	67
68	13·063	1·1160326	1·1509129	12·397	1·0933190	1·2555413	68
69	12·968	1·1128739	1·1509901	12·307	1·0901609	1·2556256	69
70	12·875	1·1097608	1·1510673	12·219	1·0870484	1·2557098	70
71	12·785	1·1066920	1·1511445	12·133	1·0839802	1·2557940	71
72	12·696	1·1036662	1·1512217	12·049	1·0809550	1·2558782	72
73	12·609	1·1006824	1·1512989	11·967	1·0779717	1·2559625	73
74	12·524	1·0977392	1·1513761	11·886	1·0750292	1·2560467	74
75	12·440	1·0948358	1·1514533	11·807	1·0721264	1·2561309	75
76	12·359	1·0919710	1·1515305	11·729	1·0692622	1·2562151	76
77	12·279	1·0891437	1·1516077	11·653	1·0664355	1·2562994	77
78	12·200	1·0863531	1·1516849	11·578	1·0636455	1·2563836	78
79	12·123	1·0835982	1·1517622	11·505	1·0608913	1·2564678	79
80	12·047	1·0808780	1·1518394	11·433	1·0581717	1·2565520	80
81	11·973	1·0781918	1·1519166	11·363	1·0554861	1·2566363	81
82	11·900	1·0755387	1·1519938	11·294	1·0528336	1·2567205	82
83	11·828	1·0729180	1·1520710	11·226	1·0502134	1·2568047	83
84	11·758	1·0703287	1·1521482	11·159	1·0476247	1·2568889	84
85	11·689	1·0677702	1·1522254	11·094	1·0450669	1·2569732	85
86	11·621	1·0652417	1·1523026	11·029	1·0425390	1·2570574	86
87	11·554	1·0627426	1·1523798	10·966	1·0400405	1·2571416	87
88	11·489	1·0602722	1·1524570	10·904	1·0375707	1·2572258	88
89	11·424	1·0578298	1·1525342	10·843	1·0351289	1·2573101	89
90	11·361	1·0554148	1·1526114	10·782	1·0327145	1·2573943	90
91	11·299	1·0530267	1·1526886	10·723	1·0303271	1·2574785	91
92	11·237	1·0506648	1·1527658	10·665	1·0279658	1·2575627	92
93	11·177	1·0483286	1·1528430	10·608	1·0256301	1·2576470	93
94	11·118	1·0460174	1·1529202	10·552	1·0233195	1·2577312	94
95	11·059	1·0437309	1·1529975	10·496	1·0210336	1·2578154	95
96	11·002	1·0414684	1·1530747	10·442	1·0187717	1·2578996	96
97	10·945	1·0392294	1·1531519	10·388	1·0165334	1·2579839	97
98	10·890	1·0370136	1·1532291	10·335	1·0143182	1·2580681	98
99	10·835	1·0348203	1·1533063	10·283	1·0121255	1·2581523	99
100	10·781	1·0326493	1·1533835	10·232	1·0099550	1·2582365	100

Sine of Inclination (1 over)	n = 035			n = 050			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
51	13 100	1 1172855	1 4631278	10 926	1 0384773	2 0901825	51
52	12 974	1 1130820	1 4632260	10 821	1 0342764	2 0903229	52
53	12 852	1 1089587	1 4633243	10 719	1 0301557	2 0904633	53
54	12 733	1 1049128	1 4634225	10 620	1 0261124	2 0906036	54
55	12 617	1 1009415	1 4635208	10 523	1 0221436	2 0907440	55
56	12 504	1 0970418	1 4636191	10 429	1 0182466	2 0908844	56
57	12 394	1 0932113	1 4637173	10 338	1 0144187	2 0910248	57
58	12 287	1 0894477	1 4638156	10 248	1 0106577	2 0911651	58
59	12 183	1 0857488	1 4639139	10 162	1 0069613	2 0913055	59
60	12 081	1 0821122	1 4640121	10 077	1 0033273	2 0914459	60
61	11 982	1 0785360	1 4641104	9 994	0 9997537	2 0915863	61
62	11 886	1 0750181	1 4642086	9 914	0 9962384	2 0917266	62
63	11 791	1 0715567	1 4643069	9 835	0 9927796	2 0918670	63
64	11 699	1 0681500	1 4644052	9 758	0 9893755	2 0920074	64
65	11 609	1 0647963	1 4645034	9 683	0 9860244	2 0921478	65
66	11 521	1 0614940	1 4646017	9 610	0 9827248	2 0922881	66
67	11 435	1 0582416	1 4647000	9 538	0 9794749	2 0924285	67
68	11 351	1 0550376	1 4647982	9 468	0 9762734	2 0925689	68
69	11 269	1 0518806	1 4648965	9 400	0 9731190	2 0927093	69
70	11 188	1 0487692	1 4649947	9 333	0 9700103	2 0928496	70
71	11 110	1 0457021	1 4650930	9 267	0 9669458	2 0929900	71
72	11 033	1 0426780	1 4651913	9 203	0 9639243	2 0931304	72
73	10 957	1 0396958	1 4652895	9 140	0 9609447	2 0932708	73
74	10 883	1 0367544	1 4653878	9 078	0 9580058	2 0934111	74
75	10 811	1 0338527	1 4654861	9 018	0 9551067	2 0935515	75
76	10 740	1 0309895	1 4655843	8 959	0 9522461	2 0936919	76
77	10 670	1 0281640	1 4656826	8 901	0 9494231	2 0938323	77
78	10 602	1 0253751	1 4657808	8 844	0 9466368	2 0939726	78
79	10 535	1 0226219	1 4658791	8 788	0 9438863	2 0941130	79
80	10 469	1 0199034	1 4659774	8 733	0 9411704	2 0942534	80
81	10 405	1 0172189	1 4660756	8 679	0 9384885	2 0943938	81
82	10 341	1 0145675	1 4661739	8 627	0 9358397	2 0945341	82
83	10 279	1 0119485	1 4662722	8 575	0 9332232	2 0946745	83
84	10 218	1 0093609	1 4663704	8 524	0 9306381	2 0948149	84
85	10 158	1 0068041	1 4664687	8 474	0 9280840	2 0949553	85
86	10 099	1 0042773	1 4665669	8 425	0 9255598	2 0950956	86
87	10 041	1 0017799	1 4666652	8 377	0 9230650	2 0952360	87
88	9 984	0 9993113	1 4667635	8 329	0 9205989	2 0953764	88
89	9 928	0 9968706	1 4668617	8 283	0 9181608	2 0955168	89
90	9 873	0 9944573	1 4669600	8 237	0 9157501	2 0956571	90
91	9 819	0 9920709	1 4670583	8 192	0 9133663	2 0957975	91
92	9 766	0 9897108	1 4671565	8 147	0 9110087	2 0959379	92
93	9 714	0 9873762	1 4672548	8 104	0 9086767	2 0960783	93
94	9 662	0 9850667	1 4673530	8 061	0 9063698	2 0962186	94
95	9 611	0 9827819	1 4674513	8 018	0 9040876	2 0963590	95
96	9 561	0 9805211	1 4675496	7 977	0 9018294	2 0964994	96
97	9 512	0 9782839	1 4676478	7 936	0 8995947	2 0966398	97
98	9 464	0 9760698	1 4677461	7 896	0 8973832	2 0967801	98
99	9 416	0 9738782	1 4678444	7 856	0 8951942	2 0969205	99
100	9 369	0 9717088	1 4679426	7 817	0 8930274	2 0970609	100

Sine of Inclination (1 over)	n = ·009			n = ·010			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
101	24·200	1·3838071	·37749623	22·197	1·3462931	·41944025	101
102	24·081	1·3816727	·37752149	22·088	1·3441592	·41946833	102
103	23·964	1·3795592	·37754676	21·981	1·3420461	·41949640	103
104	23·849	1·3774661	·37757203	21·875	1·3399535	·41952448	104
105	23·735	1·3753932	·37759730	21·771	1·3378811	·41955255	105
106	23·623	1·3733399	·37762256	21·668	1·3358282	·41958063	106
107	23·513	1·3713059	·37764783	21·567	1·3337947	·41960870	107
108	23·404	1·3692910	·37767310	21·467	1·3317802	·41963678	108
109	23·297	1·3672947	·37769837	21·369	1·3297844	·41966485	109
110	23·191	1·3653166	·37772363	21·272	1·3278067	·41969293	110
111	23·086	1·3633564	·37774890	21·176	1·3258470	·41972100	111
112	22·983	1·3614139	·37777417	21·082	1·3239049	·41974908	112
113	22·882	1·3594887	·37779944	20·988	1·3219802	·41977715	113
114	22·781	1·3575805	·37782470	20·896	1·3200724	·41980523	114
115	22·682	1·3556890	·37784997	20·806	1·3181814	·41983330	115
116	22·585	1·3538139	·37787524	20·716	1·3163068	·41986138	116
117	22·488	1·3519550	·37790051	20·628	1·3144484	·41988945	117
118	22·393	1·3501119	·37792577	20·540	1·3126057	·41991753	118
119	22·299	1·3482845	·37795104	20·454	1·3107787	·41994560	119
120	22·206	1·3464724	·37797631	20·369	1·3089671	·41997368	120
121	22·114	1·3446754	·37800158	20·285	1·3071705	·42000175	121
122	22·024	1·3428931	·37802684	20·202	1·3053887	·42002983	122
123	21·934	1·3411255	·37805211	20·120	1·3036214	·42005790	123
124	21·846	1·3393722	·37807738	20·039	1·3018686	·42008598	124
125	21·759	1·3376331	·37810265	19·959	1·3001300	·42011405	125
126	21·672	1·3359078	·37812791	19·880	1·2984051	·42014213	126
127	21·587	1·3341962	·37815318	19·801	1·2966940	·42017020	127
128	21·503	1·3324981	·37817845	19·724	1·2949964	·42019828	128
129	21·420	1·3308132	·37820372	19·648	1·2933120	·42022635	129
130	21·337	1·3291414	·37822898	19·572	1·2916406	·42025443	130
131	21·256	1·3274824	·37825425	19·498	1·2899821	·42028250	131
132	21·176	1·3258361	·37827952	19·424	1·2883363	·42031058	132
133	21·096	1·3242024	·37830479	19·351	1·2867029	·42033865	133
134	21·017	1·3225808	·37833005	19·279	1·2850817	·42036673	134
135	20·940	1·3209713	·37835532	19·208	1·2834727	·42039480	135
136	20·863	1·3193737	·37838059	19·137	1·2818756	·42042288	136
137	20·787	1·3177879	·37840586	19·067	1·2802903	·42045095	137
138	20·712	1·3162137	·37843112	18·998	1·2787165	·42047903	138
139	20·637	1·3146508	·37845639	18·930	1·2771541	·42050710	139
140	20·564	1·3130993	·37848166	18·863	1·2756029	·42053518	140
141	20·491	1·3115587	·37850693	18·796	1·2740628	·42056325	141
142	20·419	1·3100291	·37853219	18·730	1·2725336	·42059133	142
143	20·346	1·3085103	·37855746	18·665	1·2710153	·42061940	143
144	20·277	1·3070021	·37858273	18·600	1·2695076	·42064748	144
145	20·207	1·3055043	·37860800	18·536	1·2680102	·42067555	145
146	20·138	1·3040169	·37863326	18·472	1·2665233	·42070363	146
147	20·070	1·3025396	·37865853	18·410	1·2650464	·42073170	147
148	20·002	1·3010724	·37868380	18·348	1·2635797	·42075978	148
149	19·935	1·2996151	·37870907	18·286	1·2621228	·42078785	149
150	19·869	1·2981676	·37873433	18·225	1·2606758	·42081593	150

Sine of Inclination 1 over	n = 011			n = 012			Sine of Inclination 1 over
	N	log N	D	N	log N	D	
101	20 258	1 3129904	46138428	19 193	1 2831410	50332830	101
102	20 158	1 3108569	46141516	19 099	1 2810109	50336199	102
103	20 358	1 3087444	46144604	19 006	1 2788987	50339568	103
104	20 261	1 3066522	46147692	18 915	1 2768069	50342937	104
105	20 165	1 3045802	46150781	18 825	1 2747351	50346306	105
106	20 069	1 3025278	46153869	18 736	1 2726834	50349675	106
107	19 975	1 3004947	46156957	18 649	1 2706507	50353044	107
108	19 883	1 2984806	46160045	18 563	1 2686370	50356413	108
109	19 792	1 2964852	46163134	18 477	1 2666420	50359782	109
110	19 702	1 2945080	46166222	18 391	1 2646653	50 63151	110
111	19 613	1 2925487	46169310	18 311	1 2627064	50366520	111
112	19 526	1 2906071	46172398	18 229	1 2607653	50369889	112
113	19 439	1 2886828	46175487	18 149	1 2588414	50373258	113
114	18 354	1 2867755	46178575	18 069	1 2569345	50376627	114
115	18 270	1 2848848	46181663	17 991	1 2550444	50379996	115
116	19 187	1 2830106	46184751	17 913	1 2531706	50383365	116
117	19 105	1 2811526	46187840	17 837	1 2513130	50386734	117
118	19 024	1 2793104	46190928	17 761	1 2494712	50390103	118
119	18 945	1 2774838	46194016	17 687	1 2476450	50393472	119
120	18 866	1 2756726	46197104	17 613	1 2458342	50396841	120
121	18 788	1 2738765	46200193	17 540	1 2440386	50400210	121
122	18 711	1 2720951	46203281	17 469	1 2422576	50403579	122
123	18 635	1 2703283	46206369	17 398	1 2404912	50406948	123
124	18 560	1 2685759	46209457	17 328	1 2387392	50410317	124
125	18 486	1 2668377	46212546	17 258	1 2370014	50413686	125
126	18 413	1 2651134	46215634	17 190	1 2352774	50417055	126
127	18 340	1 2634027	46218722	17 123	1 2335671	50420424	127
128	18 269	1 2617055	46221810	17 056	1 2318703	50423793	128
129	18 198	1 2600215	46224899	16 990	1 2301867	50427162	129
130	18 128	1 2583506	46227987	16 925	1 2285163	50430531	130
131	18 0 9	1 2566925	46231075	16 860	1 2268586	50433900	131
132	17 991	1 2550471	46234163	16 796	1 2252136	50437269	132
133	17 923	1 2534142	46237252	16 733	1 2235821	50440638	133
134	17 856	1 2517935	46240340	16 671	1 2219608	50444007	134
135	17 790	1 2501849	46243428	16 609	1 2203526	50447376	135
136	17 726	1 2486082	46246516	16 548	1 2187563	50450745	136
137	17 661	1 2470033	46249605	16 488	1 2171718	50454114	137
138	17 597	1 2454300	46252693	16 429	1 2155990	50457483	138
139	17 534	1 2438680	46255781	16 370	1 2140374	50460852	139
140	17 471	1 2423172	46258869	16 312	1 2124872	50464221	140
141	17 409	1 2407775	46261958	16 254	1 2107479	50467590	141
142	17 348	1 2392488	46265046	16 196	1 2094196	50470959	142
143	17 288	1 2377309	46268134	16 140	1 2079021	50474328	143
144	17 228	1 2362236	46271222	16 084	1 2063952	50477697	144
145	17 168	1 2347267	46274311	16 029	1 2048987	50481066	145
146	17 110	1 2332402	46277399	15 974	1 2034126	50484435	146
147	17 052	1 2317638	46280487	15 920	1 2019366	50487804	147
148	16 994	1 2302975	46283575	15 866	1 2004708	50491173	148
149	16 937	1 2288411	46286664	15 813	1 1990148	50494542	149
150	16 881	1 2273945	46289752	15 760	1 1975686	50497911	150

Sine of Inclination (1 over)	n = ·013			n = ·014			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
101	18·038	1·2561813	·54527233	17·047	1·2316584	·58721635	101
102	17·949	1·2540486	·54530882	16·964	1·2295261	·58725566	102
103	17·862	1·2519368	·54534532	16·882	1·2274147	·58729496	103
104	17·777	1·2498455	·54538182	16·801	1·2253238	·58733427	104
105	17·692	1·2477743	·54541832	16·721	1·2232530	·58737357	105
106	17·609	1·2457227	·54545481	16·642	1·2212018	·58741288	106
107	17·526	1·2436904	·54549131	16·564	1·2191699	·58745218	107
108	17·445	1·2416771	·54552781	16·488	1·2171570	·58749149	108
109	17·365	1·2396826	·54556431	16·412	1·2151629	·58753079	109
110	17·287	1·2377062	·54560080	16·338	1·2131869	·58757010	110
111	17·209	1·2357478	·54563730	16·264	1·2112288	·58760940	111
112	17·132	1·2338070	·54567380	16·192	1·2092884	·58764871	112
113	17·056	1·2318835	·54571030	16·120	1·2073653	·58768801	113
114	16·982	1·2299770	·54574679	16·049	1·2054592	·58772732	114
115	16·908	1·2280872	·54578329	15·980	1·2035699	·58776662	115
116	16·835	1·2262138	·54581979	15·911	1·2016969	·58780593	116
117	16·763	1·2243567	·54585629	15·843	1·1998401	·58784523	117
118	16·692	1·2225153	·54589278	15·776	1·1979991	·58788454	118
119	16·622	1·2206896	·54592928	15·710	1·1961737	·58792384	119
120	16·553	1·2188792	·54596578	15·645	1·1943637	·58796315	120
121	16·485	1·2170839	·54600228	15·580	1·1925688	·58800245	121
122	16·417	1·2153033	·54603877	15·516	1·1907886	·58804176	122
123	16·351	1·2135373	·54607527	15·453	1·1890230	·58808106	123
124	16·285	1·2117857	·54611177	15·391	1·1872718	·58812037	124
125	16·220	1·2100484	·54614827	15·330	1·1855349	·58815967	125
126	16·156	1·2083248	·54618476	15·269	1·1838117	·58819898	126
127	16·092	1·2066149	·54622126	15·209	1·1821022	·58823828	127
128	16·029	1·2049185	·54625776	15·150	1·1804062	·58827759	128
129	15·967	1·2032353	·54629426	15·091	1·1787234	·58831689	129
130	15·906	1·2015653	·54633075	15·033	1·1770537	·58835620	130
131	15·846	1·1999080	·54636725	14·976	1·1753969	·58839550	131
132	15·786	1·1982634	·54640375	14·919	1·1737527	·58843480	132
133	15·727	1·1966314	·54644025	14·863	1·1721210	·58847411	133
134	15·668	1·1950115	·54647674	14·808	1·1705015	·58851342	134
135	15·610	1·1934037	·54651324	14·754	1·1688941	·58855272	135
136	15·553	1·1918078	·54654974	14·699	1·1672987	·58859203	136
137	15·496	1·1902237	·54658624	14·646	1·1657150	·58863133	137
138	15·440	1·1886513	·54662273	14·593	1·1641429	·58867064	138
139	15·385	1·1870901	·54665923	14·541	1·1625821	·58870994	139
140	15·330	1·1855402	·54669573	14·489	1·1610326	·58874925	140
141	15·276	1·1840013	·54673223	14·438	1·1594941	·58878855	141
142	15·222	1·1824734	·54676872	14·387	1·1579666	·58882786	142
143	15·169	1·1809564	·54680522	14·337	1·1564499	·58886716	143
144	15·117	1·1794499	·54684172	14·287	1·1549438	·58890647	144
145	15·065	1·1779538	·54687822	14·238	1·1534481	·58894577	145
146	15·013	1·1764681	·54691471	14·189	1·1519629	·58898508	146
147	14·962	1·1749925	·54695121	14·141	1·1504877	·58902438	147
148	14·912	1·1735270	·54698771	14·094	1·1490226	·58906369	148
149	14·862	1·1720715	·54702421	14·047	1·1475674	·58910299	149
150	14·812	1·1706257	·54706070	14·000	1·1461220	·58914230	150

Sine of Inclination (1 over)	n = 015			n = 017			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
101	16 189	1 2092242	62916038	14 776	1 1695440	71304843	101
102	16 110	1 2070923	62920249	14 703	1 1674128	71309615	102
103	16 032	1 2049813	62924460	14 632	1 1653025	71314388	103
104	15 955	1 2028907	62928671	14 562	1 1632126	71319161	104
105	15 879	1 2008203	62932883	14 493	1 1611429	71323934	105
106	15 804	1 1987695	62937094	14 424	1 1590928	71328706	106
107	15 730	1 1967380	62941305	14 357	1 1570620	71333479	107
108	15 658	1 1947255	62945516	14 291	1 1550502	71338252	108
109	15 586	1 1927317	62949728	14 225	1 1530571	71343025	109
110	15 515	1 1907561	62953939	14 161	1 1510823	71347797	110
111	15 445	1 1887984	62958150	14 097	1 1491253	71352570	111
112	15 377	1 1868584	62962361	14 034	1 1471860	71357343	112
113	*15 309*	*1 1849356*	*62966573*	*13 972*	*1 1452640*	*71362116*	*113*
114	15 242	1 1830299	62970784	13 911	1 1433591	71366888	114
115	15 175	1 1811409	62974995	13 851	1 1414707	71371661	115
116	15 110	1 1792713	62979206	13 791	1 1395988	71376434	116
117	15 046	1 1774119	62983418	13 732	1 1377431	71381207	117
118	14 982	1 1755713	62987629	13 674	1 1359032	71385979	118
119	14 919	1 1737463	62991840	13 617	1 1340790	71390752	119
120	14 857	1 1719367	62996051	13 560	1 1322701	71395525	120
121	14 796	1 1701422	63000263	13 504	1 1304762	71400298	121
122	14 735	1 1683624	63004474	13 449	1 1286972	71405070	122
123	14 676	1 1665972	63008685	13 395	1 1269327	71409843	123
124	14 617	1 1648464	63012896	13 341	1 1251826	71414616	124
125	14 558	1 1631098	63017108	13 288	1 1234467	71419389	125
126	14 501	1 1613869	63021319	13 235	1 1217246	71424161	126
127	14 444	1 1596778	63025530	13 183	1 1200162	71428934	127
128	14 387	1 1579822	63029741	13 132	1 1183213	71433707	128
129	14 332	1 1562998	63033953	13 081	1 1166396	71438480	129
130	14 277	1 1546305	63038164	13 031	1 1149710	71443252	130
131	14 222	1 1529740	63042375	12 981	1 1133153	71448025	131
132	14 169	1 1513302	63046586	12 932	1 1116722	71452798	132
133	14 116	1 1496989	63050798	12 884	1 1100416	71457571	133
134	*14 063*	*1 1480798*	*63055009*	*12 836*	1 1084232	71462343	134
135	14 011	1 1464727	63059220	12 789	1 1068169	71467116	135
136	13 960	1 1448776	63063431	12 742	1 1052225	71471889	136
137	13 909	1 1432943	63067643	12 695	1 1036399	71476662	137
138	13 859	1 1417226	63071854	12 649	1 1020689	71481434	138
139	13 809	1 1401622	63076065	12 604	1 1005092	71486207	139
140	13 760	1 1386130	63080276	12 559	1 0989608	71490980	140
141	13 711	1 1370749	63084488	12 515	1 0974234	71495753	141
142	13 663	1 1355478	63088699	12 471	1 0958970	71500525	142
143	13 615	1 1340315	63092910	12 427	1 0943814	71505298	143
144	13 568	1 1325258	63097121	12 384	1 0928764	71510071	144
145	13 522	1 1310305	63101333	12 342	1 0913818	71514844	145
146	13 476	1 1295456	63105544	12 300	1 0898976	71519616	146
147	13 430	1 1280708	63109755	12 258	1 0884235	71524389	147
148	13 384	1 1265971	63113966	12 217	1 0869595	71529162	148
149	13 340	1 1251513	63118178	12 176	1 0855054	71533935	149
150	13 296	1 1237063	63122389	12 136	1 0840612	71538707	150

Sine of Inclination (1 over)	n = ·020			n = ·0225			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
101	13·185	1·1200888	·83888050	12·184	1·0857886	·94374056	101
102	13·121	1·1179586	·83893665	12·124	1·0836592	·94380373	102
103	13·057	1·1158493	·83899280	12·066	1·0815507	·94386690	103
104	12·995	1·1137604	·83904895	12·008	1·0794626	·94393007	104
105	12·933	1·1116917	·83910510	11·951	1·0773946	·94399324	105
106	12·872	1·1096426	·83916125	11·895	1·0753462	·94405641	106
107	12·812	1·1076128	·83921740	11·839	1·0733172	·94411958	107
108	12·753	1·1056020	·83927355	11·784	1·0713072	·94418275	108
109	12·694	1·1036099	·83932970	11·730	1·0693158	·94424591	109
110	12·637	1·1016360	·83938585	11·677	1·0673427	·94430908	110
111	12·580	1·0996800	·83944200	11·625	1·0653874	·94437225	111
112	12·524	1·0977417	·83949815	11·573	1·0634499	·94443542	112
113	12·469	1·0958207	·83955430	11·522	1·0615296	·94449859	113
114	12·414	1·0939167	·83961045	11·472	1·0596264	·94456176	114
115	12·360	1·0920294	·83966660	11·422	1·0577399	·94462493	115
116	12·307	1·0901585	·83972275	11·373	1·0558697	·94468810	116
117	12·255	1·0883038	·83977890	11·324	1·0540158	·94475126	117
118	12·203	1·0864649	·83983505	11·276	1·0521776	·94481443	118
119	12·152	1·0846416	·83989120	11·229	1·0503551	·94487760	119
120	12·101	1·0828337	·83994735	11·183	1·0485479	·94494077	120
121	12·051	1·0810409	·84000350	11·137	1·0467559	·94500394	121
122	12·002	1·0792628	·84005965	11·091	1·0449786	·94506711	122
123	11·954	1·0774993	·84011580	11·046	1·0432158	·94513028	123
124	11·906	1·0757502	·84017195	11·002	1·0414674	·94519345	124
125	11·858	1·0740153	·84022810	10·958	1·0397333	·94525661	125
126	11·811	1·0722942	·84028425	10·915	1·0380130	·94531978	126
127	11·765	1·0705868	·84034040	10·872	1·0363063	·94538295	127
128	11·719	1·0688929	·84039655	10·830	1·0346131	·94544612	128
129	11·674	1·0672122	·84045270	10·788	1·0329332	·94550929	129
130	11·629	1·0655446	·84050885	10·747	1·0312663	·94557246	130
131	11·585	1·0638898	·84056500	10·706	1·0296123	·94563563	131
132	11·541	1·0622477	·84062115	10·665	1·0279710	·94569880	132
133	11·498	1·0606180	·84067730	10·625	1·0263421	·94576196	133
134	11·455	1·0590006	·84073345	10·586	1·0247255	·94582513	134
135	11·413	1·0573953	·84078960	10·547	1·0231209	·94588830	135
136	11·371	1·0558019	·84084575	10·508	1·0215282	·94595147	136
137	11·330	1·0542203	·84090190	10·470	1·0199474	·94601464	137
138	11·289	1·0526503	·84095805	10·432	1·0183782	·94607781	138
139	11·248	1·0510916	·84101420	10·395	1·0168202	·94614098	139
140	11·208	1·0495442	·84107035	10·358	1·0152735	·94620415	140
141	11·169	1·0480078	·84112650	10·321	1·0137379	·94626731	141
142	11·130	1·0464824	·84118265	10·285	1·0122132	·94633048	142
143	11·091	1·0449678	·84123880	10·249	1·0106994	·94639365	143
144	11·053	1·0434638	·84129495	10·214	1·0091961	·94645682	144
145	11·015	1·0419702	·84135110	10·179	1·0077033	·94651999	145
146	10·977	1·0404870	·84140725	10·144	1·0062209	·94658316	146
147	10·940	1·0390139	·84146340	10·110	1·0047485	·94664633	147
148	10·903	1·0375509	·84151955	10·076	1·0032862	·94670950	148
149	10·867	1·0360978	·84157570	10·042	1·0018339	·94677266	149
150	10·831	1·0346544	·84163185	10·009	1·0003913	·94683583	150

Sine of Inclination (1 over)	n = 0250			n = 0275			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
101	11 383	1 0 ›62539	1 0486006	10 728	1 0 ›04999	1 1 ›34607	101
102	11 327	1 0 ›41252	1 0486708	10 675	1 0283718	1 1535379	102
103	11 272	1 0520174	1 0487410	10 623	1 0262646	1 1536151	103
104	11 220	1 0499 ›00	1 0488112	10 572	1 0241778	1 1536923	104
105	11 165	1 0478627	1 0488814	10 ›22	1 0221112	1 1537695	105
106	11 113	1 0458151	1 0489516	10 473	1 0200642	1 1538467	106
107	11 061	1 0437868	1 0490218	10 424	1 0180 ›65	1 1539239	107
108	11 010	1 0417774	1 0490919	10 376	1 0160278	1 1540011	108
109	10 9 ›9	1 0397867	1 0491621	10 329	1 0140378	1 1540783	109
110	10 910	1 0378143	1 0492323	10 282	1 0120660	1 1541555	110
111	10 861	1 03 ›8 ›97	1 049 ›02 ›	10 236	1 0101121	1 1542328	111
112	10 812	1 0339229	1 0493727	10 190	1 0081759	1 1543100	112
113	10 765	1 0320034	1 0494429	10 145	1 0062571	1 1543872	113
114	10 718	1 0301008	1 0495131	10 101	1 0043552	1 1544644	114
115	10 671	1 0282150	1 049 ›833	10 057	1 0024700	1 1545416	115
116	10 62 ›	1 0263456	1 0496534	10 014	1 0006012	1 1546188	116
117	10 580	1 0244923	1 0497236	9 971	0 9987486	1 1546960	117
118	10 536	1 022 ›548	1 0497938	9 929	0 9969118	1 1547732	118
119	10 491	1 0208330	1 0498640	9 888	0 99 ›0906	1 1548 ›04	119
120	10 448	1 0190269	1 0499342	9 847	0 9932848	1 1549276	120
121	10 405	1 01723 ›2	1 0 ›00044	9 806	0 9914941	1 1550048	121
122	10 362	1 01 ›4586	1 0 ›00746	9 766	0 9897181	1 1550820	122
123	10 320	1 0136965	1 0 ›01448	9 727	0 9879 67	1 1551592	123
124	10 279	1 0119488	1 0502149	9 688	0 9862097	1 1552364	124
125	10 238	1 0102154	1 0 ›028 ›1	9 649	0 9844769	1 1553136	125
126	10 198	1 0084958	1 0503 ›53	9 611	0 9827579	1 155 ›908	126
127	10 158	1 0067898	1 0 ›04255	9 573	0 9810 ›26	1 1554680	127
128	10 118	1 0050974	1 0 ›04957	9 536	0 979 608	1 155 ›452	128
129	10 079	1 0034181	1 0 ›0 ›659	9 499	0 9776822	1 1556225	129
130	10 040	1 0017 ›19	1 0 ›06361	9 463	0 9760167	1 157 ›997	130
131	10 002	1 0000986	1 0507063	9 427	0 9743640	1 1557769	131
132	9 965	0 9984579	1 0507764	9 391	0 9727240	1 1558 ›41	132
133	9 927	0 9968298	1 0 ›08466	9 356	0 971096 ›	1 1559313	133
134	9 890	0 99 ›2139	1 0 ›09168	9 321	0 9694812	1 1560085	134
135	9 854	0 9936100	1 0 ›09870	9 287	0 9678780	1 1560857	135
136	9 818	0 9920180	1 0510 72	9 253	0 9662867	1 1561629	136
137	9 782	0 9904379	1 0511274	9 220	0 9647072	1 1562401	137
138	9 747	0 9888694	1 0511976	9 186	0 9631393	1 1563174	138
139	9 712	0 9873121	1 0 ›12678	9 153	0 9615827	1 157 ›945	139
140	9 678	0 985 ›661	1 0513379	9 121	0 9600374	1 1564717	140
141	9 644	0 9842312	1 0 ›14081	9 089	0 9 ›8 031	1 1565489	141
142	9 610	0 9827073	1 0514783	9 057	0 9569798	1 157 ›261	142
143	9 576	0 9811941	1 0 ›15485	9 025	0 955 ›673	1 1567034	143
144	9 543	0 9796916	1 0516187	8 994	0 9 ›39654	1 1567806	144
145	9 510	0 9781994	1 0516889	8 963	0 9524739	1 1568578	145
146	9 478	0 9767176	1 0517591	8 933	0 9 ›09928	1 1569350	146
147	9 446	0 975 ›2460	1 0518293	8 903	0 949 ›218	1 1570122	147
148	9 414	0 9737845	1 0 ›18994	8 873	0 9480609	1 1570894	148
149	9 383	0 9723328	1 0519696	8 843	0 9466099	1 1571666	149
150	9 352	0 9708909	1 0520398	8 814	0 9451687	1 1572438	150

Sine of Inclination (1 over)	$n = \cdot030$			$n = \cdot035$			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
101	10·181	1·0078063	1·2583208	9·323	0·9695611	1·4680409	101
102	10·132	1·0056788	1·2584050	9·278	0·9674347	1·4681391	102
103	10·083	1·0035722	1·2584892	9·233	0·9653292	1·4682374	103
104	10·034	1·0014860	1·2585734	9·189	0·9632441	1·4683357	104
105	9·987	0·9994200	1·2586577	9·145	0·9611792	1·4684339	105
106	9·940	0·9973736	1·2587419	9·102	0·9591339	1·4685322	106
107	9·893	0·9953465	1·2588261	9·060	0·9571079	1·4686305	107
108	9·848	0·9933385	1·2589103	9·018	0·9551009	1·4687287	108
109	9·803	0·9913491	1·2589946	8·977	0·9531126	1·4688270	109
110	9·758	0·9893779	1·2590788	8·936	0·9511425	1·4689252	110
111	9·715	0·9874246	1·2591630	8·896	0·9491904	1·4690235	111
112	9·671	0·9854890	1·2592472	8·856	0·9472559	1·4691218	112
113	9·629	0·9835707	1·2593315	8·817	0·9453387	1·4692200	113
114	9·587	0·9816694	1·2594157	8·779	0·9434385	1·4693183	114
115	9·545	0·9797848	1·2594999	8·741	0·9415550	1·4694166	115
116	9·504	0·9779166	1·2595841	8·703	0·9396879	1·4695148	116
117	9·464	0·9760647	1·2596684	8·666	0·9378370	1·4696131	117
118	9·424	0·9742285	1·2597526	8·630	0·9360019	1·4697113	118
119	9·384	0·9744079	1·2598368	8·594	0·9341824	1·4698096	119
120	9·346	0·9706027	1·2599210	8·558	0·9323783	1·4699079	120
121	9·307	0·9688126	1·2600053	8·523	0·9305893	1·4700061	121
122	9·269	0·9670372	1·2600895	8·488	0·9288150	1·4701044	122
123	9·232	0·9652765	1·2601737	8·454	0·9270553	1·4702027	123
124	9·195	0·9635301	1·2602579	8·420	0·9253101	1·4703009	124
125	9·158	0·9617979	1·2603422	8·387	0·9235790	1·4703992	125
126	9·122	0·9600794	1·2604264	8·353	0·9218617	1·4704974	126
127	9·086	0·9583748	1·2605106	8·321	0·9201581	1·4705957	127
128	9·051	0·9566836	1·2605948	8·288	0·9184680	1·4706940	128
129	9·016	0·9550056	1·2606791	8·256	0·9167911	1·4707922	129
130	8·981	0·9533407	1·2607633	8·225	0·9151273	1·4708905	130
131	8·947	0·9516886	1·2608475	8·194	0·9134763	1·4709888	131
132	8·914	0·9500492	1·2609317	8·163	0·9118380	1·4710870	132
133	8·880	0·9484223	1·2610159	8·132	0·9102122	1·4711853	133
134	8·847	0·9468076	1·2611002	8·102	0·9085986	1·4712835	134
135	8·815	0·9452050	1·2611844	8·072	0·9069971	1·4713818	135
136	8·783	0·9436143	1·2612686	8·043	0·9054075	1·4714801	136
137	8·751	0·9420354	1·2613529	8·014	0·9038297	1·4715783	137
138	8·719	0·9404681	1·2614371	7·985	0·9022635	1·4716766	138
139	8·688	0·9389121	1·2615213	7·957	0·9007086	1·4717749	139
140	8·657	0·9373674	1·2616055	7·928	0·8991650	1·4718731	140
141	8·626	0·9358337	1·2616898	7·900	0·8976324	1·4719714	141
142	8·596	0·9343110	1·2617740	7·873	0·8961108	1·4720696	142
143	8·566	0·9327991	1·2618582	7·845	0·8946000	1·4721679	143
144	8·537	0·9312978	1·2619424	7·818	0·8930998	1·4722662	144
145	8·508	0·9298070	1·2620267	7·791	0·8916100	1·4723644	145
146	8·479	0·9283265	1·2621109	7·765	0·8901306	1·4724627	146
147	8·450	0·9268561	1·2621951	7·739	0·8886613	1·4725610	147
148	8·422	0·9253958	1·2622793	7·713	0·8872021	1·4726592	148
149	8·394	0·9239453	1·2623636	7·687	0·8857528	1·4727575	149
150	8·366	0·9225047	1·2624478	7·662	0·8843133	1·4728557	150

Sine of Inclination (1 over)	n = 050			Sine of Inclination (1 over)	n = 009		
	N	log N	D		N	log N	D
101	7 778	0 8908823	2 0972013	151	19 803	1 2967299	37875960
102	7 740	0 8887085	2 0973416	152	19 738	1 2953018	37878487
103	7 703	0 8866556	2 0974820	153	19 674	1 2938829	37881014
104	7 666	0 8845731	2 0976224	154	19 610	1 2924732	37883540
105	7 630	0 8825108	2 0977628	155	19 547	1 2910727	37886067
106	7 594	0 8804681	2 0979031	156	19 484	1 2896813	37888594
107	7 559	0 8784447	2 0980435	157	19 422	1 2882988	37891121
108	7 524	0 8764403	2 0981839	158	19 361	1 2869251	37893647
109	7 490	0 8744546	2 0983243	159	19 300	1 2855601	37896174
110	7 456	0 8724871	2 0984646	160	19 240	1 2842037	37898701
111	7 422	0 8705375	2 0986050	161	19 180	1 2828557	37901228
112	7 389	0 8686056	2 0987454	162	19 121	1 2815161	37903754
113	7 357	0 8666910	2 0988858	163	19 063	1 2801848	37906281
114	7 325	0 8647933	2 0990261	164	19 005	1 2788616	37908808
115	7 293	0 8629124	2 0991665	165	18 947	1 2775466	37911335
116	7 262	0 8610479	2 0993069	166	18 890	1 2762395	37913861
117	7 231	0 8591996	2 0994473	167	18 834	1 2749403	37916388
118	7 201	0 8573671	2 0995876	168	18 778	1 2736489	37918915
119	7 171	0 8555502	2 0997280	169	18 723	1 2723652	37921442
120	7 141	0 8537487	2 0998684	170	18 668	1 2710891	37923968
121	7 112	0 8519623	2 1000088	171	18 613	1 2698205	37926495
122	7 083	0 8501906	2 1001491	172	18 559	1 2685594	37929022
123	7 054	0 8484334	2 1002895	173	18 506	1 2673056	37931549
124	7 026	0 8466907	2 1004299	174	18 453	1 2660590	37934075
125	6 998	0 8449622	2 1005703	175	18 400	1 2648196	37936602
126	6 970	0 8432475	2 1007106	176	18 348	1 2635873	37939129
127	6 943	0 8415465	2 1008510	177	18 296	1 2623620	37941656
128	6 916	0 8398589	2 1009914	178	18 245	1 2611436	37944182
129	6 890	0 8381846	2 1011318	179	18 194	1 2599322	37946709
130	6 863	0 8365234	2 1012721	180	18 144	1 2587275	37949236
131	6 837	0 8348750	2 1014125	181	18 094	1 2575295	37951763
132	6 811	0 8332393	2 1015529	182	18 044	1 2563381	37954289
133	6 786	0 8316160	2 1016933	183	17 995	1 2551532	37956816
134	6 761	0 8300050	2 1018336	184	17 946	1 2539748	37959343
135	6 736	0 8284061	2 1019740	185	17 898	1 2528028	37961870
136	6 711	0 8268191	2 1021144	186	17 850	1 2516372	37964396
137	6 687	0 8252439	2 1022548	187	17 802	1 2504779	37966923
138	6 663	0 8236803	2 1023951	188	17 755	1 2493248	37969450
139	6 639	0 8221280	2 1025355	189	17 708	1 2481778	37971977
140	6 616	0 8205869	2 1026759	190	17 662	1 2470369	37974503
141	6 593	0 8190569	2 1028163	191	17 616	1 2459021	37977030
142	6 570	0 8175379	2 1029566	192	17 570	1 2447731	37979557
143	6 547	0 8160296	2 1030970	193	17 525	1 2436500	37982084
144	6 524	0 8145320	2 1032374	194	17 480	1 2425328	37984610
145	6 502	0 8130448	2 1033778	195	17 435	1 2414214	37987137
146	6 480	0 8115680	2 1035181	196	17 391	1 2403157	37989664
147	6 458	0 8101013	2 1036585	197	17 347	1 2392157	37992191
148	6 436	0 8086446	2 1037989	198	17 303	1 2381212	37994717
149	6 415	0 8071979	2 1039393	199	17 260	1 2370323	37997244
150	6 394	0 8057609	2 1040796	200	17 217	1 2359488	37999771

Sine of Inclination (1 over)	n = ·010			n = ·011			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
151	18·165	1·2592385	·42081400	16·825	1·2259576	·46202840	151
152	18·106	1·2578107	·42087208	16·770	1·2245302	·46295928	152
153	18·047	1·2563922	·42090015	16·715	1·2231122	·46299017	153
154	17·988	1·2549830	·42092823	16·661	1·2217031	·46302105	154
155	17·930	1·2535830	·42095630	16·608	1·2203038	·46305193	155
156	17·873	1·2521921	·42098438	16·555	1·2189133	·46308281	156
157	17·816	1·2508100	·42101245	16·502	1·2175317	·46311370	157
158	17·760	1·2494368	·42104053	16·450	1·2161589	·46314458	158
159	17·704	1·2480722	·42106860	16·398	1·2147948	·46317546	159
160	17·649	1·2467163	·42109668	16·347	1·2134393	·46320634	160
161	17·594	1·2453687	·42112475	16·296	1·2120921	·46323723	161
162	17·540	1·2440296	·42115283	16·246	1·2107531	·46326811	162
163	17·486	1·2426988	·42118090	16·196	1·2094230	·46329999	163
164	17·433	1·2413761	·42120898	16·147	1·2081008	·46332987	164
165	17·381	1·2400616	·42123705	16·099	1·2067867	·46336076	165
166	17·329	1·23875 49	·42126513	16·050	1·2054805	·46339164	166
167	17·277	1·2374562	·42129320	16·002	1·2041822	·46342252	167
168	17·225	1·2361653	·42132128	15·955	1·2028917	·46345340	168
169	17·174	1·2348820	·42134935	15·908	1·2016089	·46348429	169
170	17·124	1·2336063	·42137743	15·861	1·2003336	·46351517	170
171	17·074	1·2323382	·42140550	15·815	1·1990659	·46354605	171
172	17·025	1·2310775	·42143358	15·769	1·1978057	·46357693	172
173	16·976	1·2298242	·42146165	15·724	1·1965528	·46360782	173
174	16·927	1·2285780	·42148973	15·679	1·1953071	·46363870	174
175	16·879	1·2273391	·42151780	15·634	1·1940686	·46366958	175
176	16·831	1·2261073	·42154588	15·590	1·1928372	·46370046	176
177	16·781	1·2248821	·42157395	15·546	1·1916128	·46373135	177
178	16·737	1·2236645	·42160203	15·502	1·1903953	·46376223	178
179	16·690	1·2224531	·42163010	15·459	1·1891847	·46379311	179
180	16·644	1·2212492	·42165818	15·416	1·1879809	·46382399	180
181	16·598	1·2200516	·42168625	15·374	1·1867838	·46385488	181
182	16·552	1·2188607	·42171433	15·332	1·1855933	·46388576	182
183	16·507	1·2176763	·42174240	15·290	1·1844093	·46391664	183
184	16·463	1·2164984	·42177048	15·249	1·1832318	·46394752	184
185	16·418	1·2153268	·42179855	15·208	1·1820609	·46397841	185
186	16·374	1·2141617	·42182663	15·167	1·1808961	·46400929	186
187	16·331	1·2130028	·42185470	15·127	1·1797376	·46404017	187
188	16·287	1·2118502	·42188278	15·086	1·1785853	·46407105	188
189	16·244	1·2107036	·42191085	15·047	1·1774392	·46410194	189
190	16·202	1·2095632	·42193893	15·007	1·1762992	·46413282	190
191	16·160	1·2084289	·42196700	14·968	1·1751653	·46416370	191
192	16·118	1·2073003	·42199508	14·929	1·1740372	·46419458	192
193	16·076	1·2061777	·42202315	14·891	1·1729150	·46422547	193
194	16·035	1·2050609	·42205123	14·853	1·1717987	·46425635	194
195	15·994	1·2039500	·42207930	14·815	1·1706882	·46428723	195
196	15·953	1·2028448	·42210738	14·777	1·1695834	·46431811	196
197	15·913	1·2017451	·42213545	14·740	1·1684842	·46434900	197
198	15·873	1·2006511	·42216353	14·703	1·1673906	·46437988	198
199	15·833	1·1995627	·42219160	14·666	1·1663026	·46441076	199
200	15·794	1·1984796	·42221968	14·629	1·1652200	·46444164	200

Sine of Inclination (1 over)	n = 012			n = 013			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
151	15 708	1 1961321	50501280	14 764	1 1691897	54709720	151
152	15 657	1 1947051	50504649	14 715	1 1677631	54713370	152
153	15 606	1 1932875	50508018	14 667	1 1663459	54717020	153
154	15 555	1 1918791	50511387	14 620	1 1649379	54720670	154
155	15·505	1 1904800	50514756	14 573	1 1635391	54724320	155
156	15 456	1 1890899	50518125	14 526	1 1621494	54727969	156
157	15 407	1 1877087	50521494	14 480	1 1607687	54731619	157
158	15 358	1 1863364	50524863	14 434	1 1593967	54735268	158
159	15 310	1 1849727	50528232	14 389	1 1580334	54738918	159
160	15 262	1 1836176	50531601	14 344	1 1566787	54742568	160
161	15 215	1 1822709	50535970	14 300	1 1553324	54746218	161
162	15 168	1 1809326	50538339	14 256	1 1539946	54749867	162
163	15 122	1 1796026	50541708	14 212	1 1526650	54753517	163
164	15 076	1 1782808	50545077	14 169	1 1513436	54757167	164
165	15 030	1 1769672	50548446	14 126	1 1500303	54760817	165
166	14 985	1 1756614	50551815	14 084	1 1487249	54764466	166
167	14 940	1 1743635	50555184	14 042	1 1474275	54768116	167
168	14 896	1 1730734	50558553	14 000	1 1461378	54771766	168
169	14 852	1 1717910	50562922	13 959	1 1448558	54775416	169
170	14 809	1 1705162	50565291	13 918	1 1435813	54779065	170
171	14 766	1 1692489	50568660	13 878	1 1423144	54782715	171
172	14 723	1 1679891	50572029	13 838	1 1410550	54786365	172
173	14 680	1 1667366	50575398	13 798	1 1398030	54790015	173
174	14 638	1 1654913	50578767	13 758	1 1385581	54793664	174
175	14 597	1 1642532	50582136	13 719	1 1373204	54797314	175
176	14 545	1 1630222	50585505	13 680	1 1360898	54800964	176
177	14 514	1 1617983	50588874	13 642	1 1348663	54804614	177
178	14 474	1 1605812	50592243	13 604	1 1336496	54808263	178
179	14 434	1 1593710	50595612	13 566	1 1324398	54811913	179
180	14 394	1 1581676	50598981	13 528	1 1312368	54815563	180
181	14 354	1 1569709	50602350	13 491	1 1300405	54819213	181
182	14 315	1 1557809	50605719	13 454	1 1288508	54822862	182
183	14 276	1 1545973	50609088	13 417	1 1276677	54826512	183
184	14 237	1 1534202	50612457	13 381	1 1264910	54830162	184
185	14 199	1 1522495	50615826	13 345	1 1253207	54833812	185
186	14 161	1 1510852	50619195	13 309	1 1241568	54837461	186
187	14 123	1 1499272	50622564	13 274	1 1229992	54841111	187
188	14 086	1 1487754	50625933	13 239	1 1218479	54844761	188
189	14 049	1 1476297	50629302	13 204	1 1207026	54848411	189
190	14 012	1 1464901	50632671	13 169	1 1195634	54852060	190
191	13 975	1 1453566	50636040	13 135	1·1184303	54855710	191
192	13 939	1 1442289	50639409	13 101	1 1173030	54859360	192
193	13 903	1 1431071	50642778	13 067	1 1161816	54863010	193
194	13 867	1 1419912	50646147	13 034	1 1150661	54866659	194
195	13 832	1 1408812	50649516	13 000	1 1139564	54870309	195
196	13 797	1 1397768	50652885	12 967	1 1128525	54873959	196
197	13 762	1 1386780	50656254	12·935	1 1117541	54877609	197
198	13 727	1 1375848	50659623	12 902	1 1106613	54881258	198
199	13 693	1 1364972	50662992	12 870	1 1095741	54884908	199
200	13 659	1 1354151	50666361	12 838	1 1084923	54888558	200

Sine of Inclination (1 over)	n = ·035			n = ·050			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
151	7·636	0·8828835	1·4729540	6·373	0·8043337	2·1042200	151
152	7·611	0·8814632	1·4730523	6·352	0·8029160	2·1043604	152
153	7·587	0·8800523	1·4731505	6·332	0·8015076	2·1045008	153
154	7·562	0·8786505	1·4732488	6·311	0·8001085	2·1046411	154
155	7·538	0·8772580	1·4733471	6·291	0·7987186	2·1047815	155
156	7·514	0·8758746	1·4734453	6·271	0·7973378	2·1049219	156
157	7·490	0·8745001	1·4735436	6·251	0·7959658	2·1050623	157
158	7·467	0·8731344	1·4736418	6·232	0·7946027	2·1052026	158
159	7·444	0·8717774	1·4737401	6·212	0·7932483	2·1053430	159
160	7·421	0·8704290	1·4738384	6·193	0·7919024	2·1054834	160
161	7·398	0·8690890	1·4739366	6·174	0·7905650	2·1056238	161
162	7·375	0·8677573	1·4740349	6·155	0·7892360	2·1057641	162
163	7·352	0·8664340	1·4741332	6·136	0·7879152	2·1059045	163
164	7·330	0·8651189	1·4742314	6·118	0·7866026	2·1060449	164
165	7·308	0·8638119	1·4743297	6·100	0·7852982	2·1061853	165
166	7·286	0·8625128	1·4744279	6·081	0·7840017	2·1063256	166
167	7·265	0·8612216	1·4745262	6·063	0·7827131	2·1064660	167
168	7·243	0·8599382	1·4746245	6·046	0·7814322	2·1066064	168
169	7·222	0·8586625	1·4747227	6·028	0·7801591	2·1067468	169
170	7·201	0·8573942	1·4748210	6·010	0·7788934	2·1068871	170
171	7·180	0·8561336	1·4749193	5·993	0·7776354	2·1070275	171
172	7·159	0·8548805	1·4750175	5·976	0·7763848	2·1071679	172
173	7·139	0·8536347	1·4751158	5·959	0·7751416	2·1073083	173
174	7·119	0·8523961	1·4752140	5·942	0·7739056	2·1074486	174
175	7·098	0·8511647	1·4753123	5·925	0·7726767	2·1075890	175
176	7·078	0·8499404	1·4754106	5·908	0·7714550	2·1077294	176
177	7·059	0·8487230	1·4755088	5·892	0·7702402	2·1078698	177
178	7·039	0·8475126	1·4756071	5·875	0·7690324	2·1080101	178
179	7·020	0·8463091	1·4757054	5·859	0·7678315	2·1081505	179
180	7·000	0·8451124	1·4758036	5·843	0·7666373	2·1082909	180
181	6·981	0·8439224	1·4759019	5·827	0·7654499	2·1084313	181
182	6·962	0·8427390	1·4760001	5·811	0·7642690	2·1085716	182
183	6·943	0·8415620	1·4760984	5·796	0·7630947	2·1087120	183
184	6·925	0·8403916	1·4761967	5·780	0·7619268	2·1088524	184
185	6·906	0·8392276	1·4762949	5·765	0·7607653	2·1089928	185
186	6·888	0·8380700	1·4763932	5·749	0·7596103	2·1091331	186
187	6·869	0·8369187	1·4764915	5·734	0·7584615	2·1092735	187
188	6·851	0·8357736	1·4765897	5·719	0·7573190	2·1094139	188
189	6·833	0·8346345	1·4766880	5·704	0·7561826	2·1095543	189
190	6·816	0·8335016	1·4767862	5·689	0·7550522	2·1096946	190
191	6·798	0·8323748	1·4768845	5·675	0·7539280	2·1098350	191
192	6·780	0·8312538	1·4769828	5·660	0·7528095	2·1099754	192
193	6·763	0·8301387	1·4770810	5·645	0·7516980	2·1101158	193
194	6·746	0·8290294	1·4771793	5·631	0·7505903	2·1102561	194
195	6·729	0·8279260	1·4772776	5·617	0·7494895	2·1103965	195
196	6·712	0·8268283	1·4773758	5·603	0·7483943	2·1105369	196
197	6·695	0·8257361	1·4774749	5·589	0·7473047	2·1106773	197
198	6·678	0·8246496	1·4775723	5·575	0·7462208	2·1108176	198
199	6·661	0·8235687	1·4776706	5·561	0·7451424	2·1109580	199
200	6·645	0·8224932	1·4777689	5·547	0·7440695	2·1110984	200

Sine of Inclination (1 over)	n = 009			n = 010			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
205	17 006	1 2306119	38012405	15 601	1 1931450	42236005	205
210	16 804	1 2254042	38025038	15 415	1 1879396	42250043	210
215	16 608	1 2203197	38037672	15 236	1 1828573	42264080	215
220	16 419	1 2153526	38050306	15 062	1 1778924	42278118	220
225	16 237	1 2104977	38062940	14 895	1 1730398	42292155	225
230	16 060	1 2057501	38075573	14 733	1 1682944	42306193	230
235	15 889	1 2011051	38088207	14 576	1 1636517	42320230	235
240	15 724	1 1965585	38100841	14 425	1 1591073	42334268	240
245	15 563	1 1921060	38113475	14 278	1 1546571	42348305	245
250	15 408	1 1877440	38126108	14 135	1 1502974	42362343	250
255	15 257	1 1834690	38138742	13 997	1 1460247	42376380	255
260	15 110	1 1792775	38151376	13 862	1 1418354	42390418	260
265	14 968	1 1751662	38164010	13 732	1 1377263	42404455	265
270	14 830	1 1711323	38176643	13 605	1 1336946	42418493	270
275	14 695	1 1671728	38189277	13 481	1 1297374	42432530	275
280	14 564	1 1632852	38201911	13 361	1 1258521	42446568	280
285	14 437	1 1594668	38214545	13 245	1 1220360	42460605	285
290	14 312	1 1557152	38227178	13 131	1 1182876	42474643	290
295	14 191	1 1520282	38239812	13 020	1 1146019	42488680	295
300	14 074	1 1484036	38252446	12 912	1 1109796	42502718	300
305	13 959	1 1448393	38265080	12 806	1 1074175	42516755	305
310	13 846	1 1413333	38277713	12 703	1 1039137	42530793	310
315	13 737	1 1378839	38290347	12 603	1 1004666	42544830	315
320	13 630	1 1344893	38302981	12 505	1 0970742	42558868	320
325	13 525	1 1311473	38315615	12 409	1 0937347	42572905	325
330	13 423	1 1278573	38328248	12 315	1 0904467	42586943	330
335	13 323	1 1246169	38340882	12 224	1 0872085	42600980	335
340	13 226	1 1214249	38353516	12 134	1 0840187	42615018	340
345	13 130	1 1182798	38366150	12 047	1 0808759	42629055	345
350	13 037	1 1151803	38378783	11 961	1 0777787	42643093	350
355	12 946	1 1121251	38391417	11 878	1 0747257	42657130	355
360	12 856	1 1091129	38404051	11 795	1 0717159	42671168	360
365	12 769	1 1061427	38416685	11 715	1 0687479	42685205	365
370	12 683	1 1032133	38429318	11 636	1 0658207	42699243	370
375	12 599	1 1003236	38441952	11 559	1 0629333	42713280	375
380	12 516	1 0974725	38454586	11 484	1 0600844	42727318	380
385	12 435	1 0946589	38467220	11 410	1 0572730	42741355	385
390	12 356	1 0918819	38479853	11 337	1 0544983	42755393	390
395	12 278	1 0891407	38492487	11 266	1 0517593	42769430	395
400	12 202	1 0864342	38505121	11 196	1 0490550	42783468	400
405	12 127	1 0837616	38517755	11 127	1 0463848	42797505	405
410	12 054	1 0811222	38530388	11 060	1 0437476	42811543	410
415	11 982	1 0785151	38543022	10 994	1 0411427	42825580	415
420	11 911	1 0759395	38555656	10 929	1 0385693	42839618	420
425	11 841	1 0733946	38568290	10 865	1 0360266	42853655	425
430	11 773	1 0708798	38580923	10 802	1 0335141	42867693	430
435	11 706	1 0683943	38593557	10 741	1 0310310	42881730	435
440	11 640	1 0659376	38606191	10 680	1 0285765	42895768	440
445	11 575	1 0635089	38618825	10 621	1 0261500	42909805	445
450	11 511	1 0611076	38631458	10 562	1 0237509	42923843	450

Sine of Inclination (1 over)	n = ·011			n = ·012			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
205	14·451	1·1598876	·46159606	23·492	1·1300817	·50683206	205
210	14·279	1·1546813	·46175017	13·332	1·1248835	·50700051	210
215	14·113	1·1496612	·46190188	13·177	1·1198055	·50716896	215
220	13·952	1·1446115	·46505929	13·027	1·1148450	·50733741	220
225	13·797	1·1397911	·46521371	12·882	1·1099966	·50750586	225
230	13·647	1·1350479	·46536812	12·743	1·1052555	·50767431	230
235	13·502	1·1304073	·46555253	12·607	1·1006170	·50784276	235
240	13·362	1·1258650	·46567694	12·476	1·0960768	·50801121	240
245	13·226	1·1214169	·46583136	12·349	1·0916309	·50817966	245
250	13·091	1·1170595	·46598577	12·226	1·0872754	·50834811	250
255	12·965	1·1127889	·46614018	12·106	1·0830070	·50851656	255
260	12·841	1·1086018	·46629459	11·990	1·0788220	·50868501	260
265	12·720	1·1044950	·46644901	11·877	1·0747172	·50885346	265
270	12·603	1·1004655	·46660342	11·768	1·0706897	·50902191	270
275	12·489	1·0965104	·46675783	11·661	1·0667368	·50919036	275
280	12·377	1·0926272	·46691224	11·557	1·0628557	·50935881	280
285	12·269	1·0888132	·46706666	11·456	1·0590439	·50952726	285
290	12·164	1·0850661	·46722107	11·358	1·0552988	·50969571	290
295	12·061	1·0813835	·46737548	11·262	1·0516183	·50986416	295
300	11·961	1·0777634	·46752989	11·168	1·0480002	·51003261	300
305	11·863	1·0742035	·46768431	11·078	1·0444424	·51020106	305
310	11·768	1·0707019	·46783872	10·989	1·0409429	·51036951	310
315	11·675	1·0672569	·46799313	10·902	1·0375000	·51053796	315
320	11·584	1·0638667	·46814754	10·817	1·0341118	·51070641	320
325	11·496	1·0605294	·46830196	10·734	1·0307766	·51087486	325
330	11·409	1·0572434	·46845637	10·654	1·0274928	·51104331	330
335	11·324	1·0540075	·46861078	10·574	1·0242589	·51121176	335
340	11·241	1·0508199	·46876519	10·497	1·0210734	·51138021	340
345	11·160	1·0476793	·46891961	10·422	1·0179348	·51154866	345
350	11·081	1·0445842	·46907402	10·348	1·0148418	·51171711	350
355	11·004	1·0415333	·46922843	10·275	1·0117931	·51188556	355
360	10·928	1·0385256	·46938284	10·204	1·0087875	·51205401	360
365	10·853	1·0355598	·46953726	10·135	1·0058238	·51222246	365
370	10·780	1·0326349	·46969167	10·067	1·0029009	·51239091	370
375	10·709	1·0297496	·46984608	10·000	1·0000176	·51255936	375
380	10·639	1·0269028	·47000049	9·935	0·9971730	·51272781	380
385	10·570	1·0240936	·47015491	9·871	0·9943659	·51289626	385
390	10·503	1·0213210	·47030932	9·808	0·9915954	·51306471	390
395	10·437	1·0185843	·47046373	9·747	0·9888607	·51323316	395
400	10·372	1·0158821	·47061814	9·686	0·9861607	·51340161	400
405	10·309	1·0132140	·47077256	9·627	0·9834946	·51357006	405
410	10·247	1·0105789	·47092697	9·569	0·9808616	·51373851	410
415	10·185	1·0079762	·47108138	9·512	0·9782610	·51390696	415
420	10·125	1·0054050	·47123579	9·456	0·9756919	·51407541	420
425	10·066	1·0028643	·47139021	9·401	0·9731535	·51424386	425
430	10·008	1·0003541	·47154462	9·346	0·9706452	·51441231	430
435	9·951	0·9978731	·47169903	9·293	0·9681662	·51458076	435
440	9·895	0·9954208	·47185344	9·241	0·9657160	·51474921	440
445	9·840	0·9929965	·47200786	9·190	0·9632937	·51491766	445
450	9·786	0·9905995	·47216227	9·139	0·9608989	·51508611	450

Sine of Inclination (1 over	n = 013			n = 014			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
205	12 681	1 1031640	54906807	11 986	1 0786818	59130407	205
210	12 530	1 0979649	54925055	11 844	1 0734846	59150060	210
215	12 385	1 0928889	54943304	11 706	1 0684105	59169712	215
220	12 244	1 0879303	54961553	11 573	1 0634539	59189365	220
225	12 108	1 0830840	54979802	11 445	1 0586095	59209017	225
230	11 977	1 0783449	54998050	11 321	1 0538723	59228670	230
235	11 850	1 0737085	55016299	11 201	1 0492378	59248322	235
240	11 727	1 0691703	55034548	11 084	1 0447016	59267975	240
245	11 607	1 0647263	55052797	10 971	1 0402596	59287627	245
250	11 491	1 0603729	55071045	10 862	1 0359081	59307280	250
255	11 379	1 0561064	55089294	10 756	1 0316436	59326932	255
260	11 270	1 0519235	55107543	10 653	1 0274626	59346585	260
265	11 164	1 0478208	55125792	10 553	1 0233618	59366237	265
270	11 061	1 0437953	55144040	10 455	1 0193383	59385890	270
275	10 961	1 0398444	55162289	10 361	1 0153893	59405542	275
280	10 863	1 0359653	55180538	10 269	1 0115122	59425195	280
285	10 769	1 0321554	55198787	10 179	1 0077042	59444847	285
290	10 676	1 0284123	55217035	10 092	1 0039631	59464500	290
295	10 586	1 0247338	55235284	10 007	1 0002866	59484152	295
300	10 498	1 0211178	55253533	9 924	0 9966724	59503805	300
305	10 413	1 0175620	55271782	9 843	0 9931186	59523457	305
310	10 329	1 0140646	55290030	9 764	0 9896231	59543110	310
315	10 248	1 0106237	55308279	9 687	0 9861841	59562762	315
320	10 168	1 0072375	55326528	9 612	0 9827999	59582415	320
325	10 090	1 0039043	55344777	9 538	0 9794687	59602067	325
330	10 114	1 0006126	55363025	9 466	0 9761888	59621720	330
335	9 940	0 9973907	55381274	9 396	0 9729589	59641372	335
340	9 868	0 9942071	55399523	9 328	0 9697773	59661025	340
345	9 796	0 9910705	55417772	9 261	0 9666427	59680677	345
350	9 727	0 9879795	55436020	9 195	0 9635536	59700330	350
355	9 659	0 9849328	55454269	9 131	0 9605089	59719982	355
360	9 592	0 9819292	55472518	9 068	0 9575072	59739635	360
365	9 527	0 9789675	55490767	9 006	0 9545474	59759287	365
370	9 463	0 9760466	55509015	8 946	0 9516284	59778940	370
375	9 401	0 9731654	55527264	8 887	0 9487491	59798592	375
380	9 339	0 9703227	55545513	8 829	0 9459084	59818245	380
385	9 279	0 9675176	55563762	8 772	0 9431052	59837897	385
390	9 220	0 9647492	55582010	8 716	0 9403387	59857550	390
395	9 163	0 9620164	55600259	8 662	0 9376079	59877202	395
400	9 106	0 9593184	55618508	8 608	0 9349118	59896855	400
405	9 050	0 9566544	55636757	8 556	0 9322498	59916507	405
410	8 995	0 9540235	55655005	8 504	0 9296208	59936160	410
415	8 942	0 9514248	55673254	8 453	0 9270241	59955812	415
420	8 889	0 9488577	55691503	8 403	0 9244589	59975465	420
425	8 837	0 9463213	55709752	8 355	0 9219244	59995117	425
430	8 786	0 9438150	55728000	8 307	0 9194201	60014770	430
435	8 736	0 9413381	55746249	8 259	0 9169451	60034422	435
440	8 687	0 9388899	55764498	8 213	0 9144988	60054075	440
445	8 639	0 9364696	55782747	8 167	0 9120805	60073727	445
450	8 592	0 9340767	55800995	8 122	0 9096895	60093380	450

Sine of Inclination (1 over)	n = ·015			n = ·017			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
205	11·384	1·0562867	·63354008	10·392	1·0166809	·71801209	205
210	11·248	1·0510914	·63375064	10·268	1·0114892	·71825072	210
215	11·118	1·0460192	·63396120	10·149	1·0064206	·71848936	215
220	10·992	1·0410645	·63417176	10·034	1·0014694	·71872800	220
225	10·870	1·0362220	·63438233	9·923	0·9966305	·71896664	225
230	10·752	1·0314867	·63459289	9·815	0·9918987	·71920527	230
235	10·638	1·0268541	·63480345	9·711	0·9872697	·71944391	235
240	10·527	1·0223198	·63501401	9·610	0·9827389	·71968255	240
245	10·420	1·0178796	·63522458	9·513	0·9783023	·71992119	245
250	10·316	1·0135300	·63543514	9·418	0·9739563	·72015982	250
255	10·216	1·0092674	·63564570	9·326	0·9696972	·72039846	255
260	10·118	1·0050883	·63585626	9·237	0·9655216	·72063710	260
265	10·023	1·0009893	·63606683	9·150	0·9614263	·72087574	265
270	9·930	0·9969677	·63627739	9·066	0·9574083	·72111437	270
275	9·841	0·9930206	·63648795	8·984	0·9534647	·72135301	275
280	9·753	0·9891453	·63669851	8·904	0·9495930	·72159165	280
285	9·668	0·9853393	·63690908	8·826	0·9457905	·72183029	285
290	9·585	0·9816000	·63711964	8·751	0·9420548	·72206892	290
295	9·504	0·9779253	·63733020	8·677	0·9383837	·72230756	295
300	9·426	0·9743131	·63754076	8·605	0·9347750	·72254620	300
305	9·349	0·9707611	·63775133	8·536	0·9312266	·72278484	305
310	9·274	0·9672675	·63796189	8·467	0·9277365	·72302347	310
315	9·201	0·9638304	·63817245	8·400	0·9243030	·72326211	315
320	9·130	0·9604480	·63838301	8·335	0·9209242	·72350075	320
325	9·060	0·9571187	·63859358	8·272	0·9175984	·72373939	325
330	8·992	0·9538407	·63880414	8·210	0·9143240	·72397802	330
335	8·925	0·9506126	·63901470	8·149	0·9110994	·72421666	335
340	8·860	0·9474329	·63922526	8·090	0·9079233	·72445530	340
345	8·796	0·9443001	·63943583	8·032	0·9047941	·72469394	345
350	8·734	0·9412129	·63964639	7·975	0·9017104	·72493257	350
355	8·673	0·9381700	·63985695	7·919	0·8986711	·72517121	355
360	8·613	0·9351702	·64006751	7·865	0·8956748	·72540985	360
365	8·555	0·9322123	·64027808	7·811	0·8927205	·72564849	365
370	8·497	0·9292952	·64048864	7·759	0·8898069	·72588712	370
375	8·441	0·9264178	·64069920	7·708	0·8869331	·72612576	375
380	8·386	0·9235789	·64090976	7·658	0·8840979	·72636440	380
385	8·333	0·9207776	·64112033	7·609	0·8813001	·72660304	385
390	8·280	0·9180130	·64133089	7·560	0·8785389	·72684167	390
395	8·228	0·9152841	·64154145	7·513	0·8758136	·72708031	395
400	8·177	0·9125899	·64175201	7·467	0·8731229	·72731895	400
405	8·127	0·9099297	·64196258	7·421	0·8704662	·72755759	405
410	8·078	0·9073025	·64217314	7·376	0·8678426	·72779622	410
415	8·030	0·9047077	·64238370	7·332	0·8652513	·72803486	415
420	7·983	0·9021443	·64259426	7·289	0·8626915	·72827350	420
425	7·936	0·8996117	·64280483	7·247	0·8601624	·72851214	425
430	7·890	0·8971093	·64301539	7·206	0·8576635	·72875077	430
435	7·846	0·8946361	·64322595	7·165	0·8551940	·72898941	435
440	7·802	0·8921917	·64343651	7·125	0·8527531	·72922805	440
445	7·758	0·8897752	·64364708	7·085	0·8503402	·72946669	445
450	7·716	0·8873862	·64385764	7·046	0·8479546	·72970532	450

Sine of Inclination (1 over)	n = 020			n = 0225			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
205	9 275	0 9673285	84472010	8 572	0 9331068	95031011	205
210	9 165	0 9621417	84500085	8 471	0 9279238	95062596	210
215	9 059	0 9570780	84528160	8 373	0 9228638	95094180	215
220	8 956	0 9521318	84556235	8 278	0 9179214	95125765	220
225	8 857	0 9472978	84584310	8 186	0 9130912	95157349	225
230	8 761	0 9425710	84612385	8 098	0 9083681	95188933	230
235	8 669	0 9379468	84640460	8 012	0 9037477	95220518	235
240	8 579	0 9334210	84668535	7 929	0 8992257	95252102	240
245	8 492	0 9289894	84696610	7 849	0 8947978	95283686	245
250	8 407	0 9246482	84724685	7 771	0 8904604	95315271	250
255	8 325	0 9203941	84752760	7 695	0 8862100	95346855	255
260	8 246	0 9162234	84780835	7 622	0 8820432	95378440	260
265	8 168	0 9121330	84808910	7 550	0 8779565	95410024	265
270	8 093	0 9081199	84836985	7 481	0 8739471	95441608	270
275	8 020	0 9041812	84865060	7 413	0 8700122	95473193	275
280	7 949	0 9003144	84893135	7 348	0 8661491	95504777	280
285	7 880	0 8965169	84921210	7 284	0 8623553	95536361	285
290	7 812	0 8927861	84949285	7 222	0 8586283	95567946	290
295	7 747	0 8891199	84977360	7 161	0 8549659	95599530	295
300	7 683	0 8855161	85005435	7 102	0 8513658	95631115	300
305	7 620	0 8819726	85033510	7 044	0 8478260	95662699	305
310	7 559	0 8784874	85061585	6 988	0 8443446	95694283	310
315	7 500	0 8750588	85089660	6 933	0 8409198	95725868	315
320	7 442	0 8716849	85117735	6 879	0 8375497	95757452	320
325	7 385	0 8683640	85145810	6 827	0 8342325	95789036	325
330	7 330	0 8650945	85173885	6 776	0 8309667	95820621	330
335	7 276	0 8618749	85201960	6 726	0 8277508	95852205	335
340	7 223	0 8587037	85230035	6 677	0 8245834	95883790	340
345	7 171	0 8555794	85258110	6 629	0 8214628	95915374	345
350	7 120	0 8525006	85286185	6 582	0 8183878	95946958	350
355	7 071	0 8494662	85314260	6 537	0 8153571	95978543	355
360	7 022	0 8464748	85342335	6 492	0 8123695	96010127	360
365	6 975	0 8435254	85370410	6 448	0 8094238	96041711	365
370	6 928	0 8406168	85398485	6 405	0 8065189	96073296	370
375	6 883	0 8377478	85426560	6 363	0 8036536	96104880	375
380	6 838	0 8349174	85454635	6 322	0 8008269	96136465	380
385	6 794	0 8321246	85482710	6 281	0 7980379	96168049	385
390	6 751	0 8293683	85510785	6 242	0 7952853	96199633	390
395	6 709	0 8266478	85538860	6 203	0 7925686	96231218	395
400	6 667	0 8239620	85566935	6 164	0 7898866	96262802	400
405	6 627	0 8213103	85595010	6 127	0 7872385	96294386	405
410	6 587	0 8186916	85623085	6 090	0 7846235	96325971	410
415	6 548	0 8161052	85651160	6 054	0 7820408	96357555	415
420	6 510	0 8135503	85679235	6 019	0 7794897	96389140	420
425	6 472	0 8110261	85707310	5 984	0 7769692	96420724	425
430	6 435	0 8085321	85735385	5 949	0 7744789	96452308	430
435	6 398	0 8060674	85763460	5 916	0 7720179	96523893	435
440	6 363	0 8036313	85791535	5 883	0 7695856	96555477	440
445	6 327	0 8012233	85819610	5 850	0 7671813	96587061	445
450	6 293	0 7988427	85847645	5 818	0 7648045	96578646	450

Sine of Inclination (1 over)	n = ·0250			n = ·0275			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
205	8·010	0·9036449	1·0559001	7·550	0·8779582	1·1614901	205
210	7·915	0·8984653	1·0562511	7·461	0·8727819	1·1618762	210
215	7·824	0·8934089	1·0566020	7·374	0·8677287	1·1622622	215
220	7·735	0·8884699	1·0569529	7·291	0·8627930	1·1626482	220
225	7·650	0·8836431	1·0573039	7·211	0·8579695	1·1630343	225
230	7·567	0·8789236	1·0576548	7·133	0·8532532	1·1634203	230
235	7·487	0·8743067	1·0580058	7·057	0·8486395	1·1638063	235
240	7·409	0·8697881	1·0583567	6·984	0·8441242	1·1641924	240
245	7·334	0·8653637	1·0587076	6·914	0·8397030	1·1645784	245
250	7·262	0·8610298	1·0590586	6·845	0·8353723	1·1649644	250
255	7·191	0·8567829	1·0594095	6·778	0·8311286	1·1653505	255
260	7·122	0·8526194	1·0597604	6·714	0·8269685	1·1657365	260
265	7·056	0·8485362	1·0601114	6·651	0·8228885	1·1661225	265
270	6·991	0·8445303	1·0604623	6·590	0·8188858	1·1665085	270
275	6·928	0·8405989	1·0608133	6·531	0·8149576	1·1668946	275
280	6·867	0·8367393	1·0611642	6·473	0·8111013	1·1672806	280
285	6·807	0·8329490	1·0615151	6·417	0·8073141	1·1676666	285
290	6·749	0·8292254	1·0618661	6·362	0·8035938	1·1680527	290
295	6·692	0·8255665	1·0622170	6·309	0·7999381	1·1684387	295
300	6·637	0·8219699	1·0625679	6·257	0·7963448	1·1688247	300
305	6·583	0·8184336	1·0629189	6·206	0·7928117	1·1692108	305
310	6·531	0·8149557	1·0632698	6·157	0·7893370	1·1695968	310
315	6·479	0·8115343	1·0636208	6·108	0·7859188	1·1699828	315
320	6·429	0·8081676	1·0639717	6·061	0·7825553	1·1703689	320
325	6·380	0·8048539	1·0643226	6·015	0·7792448	1·1707549	325
330	6·333	0·8015916	1·0646736	5·970	0·7759858	1·1711409	330
335	6·286	0·7983792	1·0650245	5·926	0·7727766	1·1715270	335
340	6·240	0·7952152	1·0653754	5·883	0·7696158	1·1719130	340
345	6·196	0·7920981	1·0657264	5·841	0·7665019	1·1722990	345
350	6·152	0·7890265	1·0660773	5·800	0·7634336	1·1726850	350
355	6·109	0·7859993	1·0664283	5·760	0·7604095	1·1730711	355
360	6·068	0·7830152	1·0667792	5·720	0·7574286	1·1734571	360
365	6·027	0·7800729	1·0671301	5·682	0·7544895	1·1738431	365
370	5·986	0·7771715	1·0674811	5·644	0·7515913	1·1742292	370
375	5·947	0·7743097	1·0678320	5·607	0·7487327	1·1746152	375
380	5·909	0·7714864	1·0681829	5·571	0·7459127	1·1750012	380
385	5·871	0·7687007	1·0685339	5·535	0·7431302	1·1753873	385
390	5·834	0·7659517	1·0688848	5·500	0·7403845	1·1757733	390
395	5·797	0·7632385	1·0692358	5·466	0·7376744	1·1761593	395
400	5·762	0·7605599	1·0695867	5·433	0·7349990	1·1765454	400
405	5·727	0·7579153	1·0699376	5·400	0·7323576	1·1769314	405
410	5·693	0·7553038	1·0702886	5·367	0·7297493	1·1773174	410
415	5·659	0·7527246	1·0706395	5·335	0·7271733	1·1777035	415
420	5·626	0·7501768	1·0709904	5·304	0·7246288	1·1780895	420
425	5·593	0·7476598	1·0713414	5·274	0·7221150	1·1784755	425
430	5·561	0·7451730	1·0716923	5·244	0·7196314	1·1788615	430
435	5·530	0·7427155	1·0720433	5·214	0·7171770	1·1792476	435
440	5·499	0·7402866	1·0723942	5·185	0·7147514	1·1796336	440
445	5·469	0·7378857	1·0727451	5·156	0·7123537	1·1800196	445
450	5·439	0·7355123	1·0730961	5·128	0·7099835	1·1804057	450

Sine of Inclination (1 over)	n = 030			n = 035			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
205	7 167	0 8553276	1 2670802	6 564	0 8171961	1 4782602	205
210	7 082	0 8501543	1 2675013	6 487	0 8120283	1 4787515	210
215	7 000	0 8451041	1 2679224	6 412	0 8069836	1 4792428	215
220	6 921	0 8401713	1 2683435	6 340	0 8020563	1 4797341	220
225	6 845	0 8353508	1 2687647	6 270	0 7972412	1 4802254	225
230	6 771	0 8306375	1 2691858	6 202	0 7925333	1 4807167	230
235	6 699	0 8260269	1 2696069	6 137	0 7879281	1 4812081	235
240	6 630	0 8215146	1 2700280	6 073	0 7834212	1 4816994	240
245	6 563	0 8170964	1 2704492	6 012	0 7790085	1 4821907	245
250	6 498	0 8127688	1 2708703	5 952	0 7746863	1 4826820	250
255	6 435	0 8085281	1 2712914	5 895	0 7704511	1 4831733	255
260	6 373	0 8043709	1 2717125	5 838	0 7662993	1 4836646	260
265	6 314	0 8002940	1 2721337	5 784	0 7622278	1 4841559	265
270	6 256	0 7962942	1 2725548	5 731	0 7582335	1 4846472	270
275	6 200	0 7923691	1 2729759	5 680	0 7543137	1 4851386	275
280	6 145	0 7885158	1 2733970	5 629	0 7504659	1 4856299	280
285	6 092	0 7847316	1 2738182	5 581	0 7466872	1 4861212	285
290	6 040	0 7810143	1 2742393	5 533	0 7429753	1 4866125	290
295	5 989	0 7773616	1 2746604	5 487	0 7393280	1 4871038	295
300	5 940	0 7737713	1 2750815	5 442	0 7357431	1 4875951	300
305	5 892	0 7702412	1 2755027	5 398	0 7322185	1 4880864	305
310	5 845	0 7667694	1 2759238	5 355	0 7287522	1 4885777	310
315	5 799	0 7633542	1 2763449	5 313	0 7253424	1 4890691	315
320	5 754	0 7599938	1 2767660	5 272	0 7219873	1 4895604	320
325	5 711	0 7566864	1 2771872	5 232	0 7186853	1 4900517	325
330	5 668	0 7534302	1 2776083	5 193	0 7154346	1 4905430	330
335	5 626	0 7502241	1 2780294	5 155	0 7122338	1 4910343	335
340	5 586	0 7470663	1 2784505	5 118	0 7090814	1 4915256	340
345	5 546	0 7439553	1 2788717	5 081	0 7059760	1 4920169	345
350	5 507	0 7408900	1 2792928	5 046	0 7029160	1 4925082	350
355	5 469	0 7378690	1 2797139	5 011	0 6999004	1 4929996	355
360	5 431	0 7348911	1 2801350	4 977	0 6969279	1 4934909	360
365	5 395	0 7319550	1 2805562	4 943	0 6939972	1 4939822	365
370	5 359	0 7290598	1 2809773	4 910	0 6911074	1 4944735	370
375	5 324	0 7262042	1 2813984	4 878	0 6882572	1 4949648	375
380	5 289	0 7233871	1 2818195	4 847	0 6854457	1 4954561	380
385	5 255	0 7206076	1 2822407	4 816	0 6826716	1 4959474	385
390	5 222	0 7178649	1 2826618	4 786	0 6799341	1 4964387	390
395	5 190	0 7151578	1 2830829	4 756	0 6772324	1 4969301	395
400	5 158	0 7124854	1 2835040	4 727	0 6745654	1 4974214	400
405	5 127	0 7098470	1 2839252	4 698	0 6719323	1 4979127	405
410	5 096	0 7072416	1 2843463	4 670	0 6693324	1 4984040	410
415	5 066	0 7046686	1 2847674	4 643	0 6667648	1 4988953	415
420	5 036	0 7021270	1 2851885	4 616	0 6642286	1 4993866	420
425	5 007	0 6996162	1 2856097	4 589	0 6617232	1 4998779	425
430	4 979	0 6971356	1 2860308	4 563	0 6592478	1 5003692	430
435	4 951	0 6946842	1 2864519	4 537	0 6568020	1 5008606	435
440	4 923	0 6922616	1 2868730	4 512	0 6543847	1 5013519	440
445	4 896	0 6898669	1 2872942	4 487	0 6519954	1 5018432	445
450	4 870	0 6874996	1 2877153	4 463	0 6496335	1 5023345	450

Sine of Inclination (1 over)	n = ·050			Sine of Inclination (1 over)	n = ·009		
	N	log. N	D		N	log. N	D
205	5·480	0·7387853	2·1118003	455	11·448	1·0587332	·38644092
210	5·415	0·7336303	2·1125021	460	11·386	1·0563849	·38656726
215	5·353	0·7285983	2·1132040	465	11·326	1·0540623	·38669360
220	5·293	0·7236839	2·1139059	470	11·266	1·0517649	·38681993
225	5·235	0·7188817	2·1146078	475	11·207	1·0494920	·38694627
230	5·178	0·7141866	2·1153096	480	11·149	1·0472432	·38707261
235	5·124	0·7095942	2·1160115	485	11·092	1·0450177	·38719895
240	5·071	0·7051001	2·1167134	490	11·036	1·0428156	·38732528
245	5·020	0·7007002	2·1174153	495	10·981	1·0406360	·38745162
250	4·970	0·6963908	2·1181171	500	10·926	1·0384785	·38757796
255	4·922	0·6921683	2·1188190	505	10·873	1·0363428	·38770430
260	4·876	0·6880294	2·1195209	510	10·820	1·0342283	·38783063
265	4·830	0·6839707	2·1202228	515	10·768	1·0321347	·38795697
270	4·786	0·6799892	2·1209246	520	10·717	1·0300615	·38808331
275	4·743	0·6760822	2·1216265	525	10·666	1·0280084	·38820965
280	4·702	0·6722471	2·1223284	530	10·616	1·0259752	·38833598
285	4·661	0·6684812	2·1230303	535	10·567	1·0239613	·38846232
290	4·621	0·6647821	2·1237321	540	10·519	1·0219663	·38858866
295	4·583	0·6611475	2·1244340	545	10·471	1·0199898	·38871500
300	4·545	0·6575753	2·1251359	550	10·424	1·0180316	·38884133
305	4·509	0·6540635	2·1258378	555	10·377	1·0160914	·38896767
310	4·473	0·6506099	2·1265396	560	10·332	1·0141689	·38909401
315	4·438	0·6472129	2·1272415	565	10·286	1·0122636	·38922035
320	4·404	0·6438706	2·1279434	570	10·242	1·0103753	·38934668
325	4·371	0·6405812	2·1286453	575	10·198	1·0085037	·38947302
330	4·339	0·6373433	2·1293471	580	10·154	1·0066485	·38959936
335	4·307	0·6341552	2·1300490	585	10·111	1·0048095	·38972570
340	4·276	0·6310155	2·1307509	590	10·069	1·0029863	·38985203
345	4·245	0·6279228	2·1314528	595	10·027	1·0011787	·38997837
350	4·216	0·6248756	2·1321546	600	9·986	0·9993866	·39010471
355	4·187	0·6218727	2·1328565	605	9·945	0·9976095	·39023105
360	4·158	0·6189129	2·1335584	610	9·905	0·9958472	·39035738
365	4·130	0·6159949	2·1342603	615	9·865	0·9940995	·39048372
370	4·103	0·6131178	2·1349621	620	9·826	0·9923661	·39061006
375	4·076	0·6102803	2·1356640	625	9·787	0·9906469	·39073640
380	4·050	0·6074814	2·1363659	630	9·749	0·9889416	·39086273
385	4·025	0·6047200	2·1370678	635	9·711	0·9872499	·39098907
390	3·999	0·6019952	2·1377696	640	9·673	0·9855716	·39111541
395	3·975	0·5993062	2·1384715	645	9·636	0·9839066	·39124175
400	3·950	0·5966519	2·1391734	650	9·600	0·9822547	·39136808
405	3·926	0·5940315	2·1398753	655	9·563	0·9806156	·39149442
410	3·903	0·5914442	2·1405771	660	9·528	0·9789892	·39162076
415	3·881	0·5888893	2·1412790	665	9·492	0·9773753	·39174710
420	3·858	0·5863658	2·1419809	670	9·457	0·9757736	·39187343
425	3·836	0·5838730	2·1426828	675	9·423	0·9741841	·39199977
430	3·814	0·5814104	2·1433846	680	9·389	0·9726064	·39212611
435	3·793	0·5789771	2·1440865	685	9·355	0·9710405	·39225245
440	3·772	0·5765724	2·1447884	690	9·322	0·9694862	·39237878
445	3·751	0·5741958	2·1454903	695	9·289	0·9679432	·39250512
450	3·731	0·5718465	2·1461921	700	9·256	0·9664115	·39263146

Sine of Inclination 1 over	n = 010			n = 011			Sine of Inclination 1 over
	N	log N	D	N	log N	D	
455	10 505	1 0213787	42937880	9 733	0 9882295	47231668	455
460	10 448	1 0190327	42951918	9 680	0 9858857	47247109	460
465	10 392	1 0167123	42965955	9 629	0 9835674	47262251	465
470	10 338	1 0144171	42979993	9 578	0 9812744	47277992	470
475	10 284	1 0121464	42994030	9 528	0 9790058	47293433	475
480	10 231	1 0098998	43008068	9 479	0 9767614	47308874	480
485	10 178	1 0076767	43022105	9 431	0 9745405	47324316	485
490	10 127	1 0054768	43036143	9 383	0 9723427	47339757	490
495	10 076	1 0032994	43050180	9 336	0 9701674	47355198	495
500	10 026	1 0011442	43064218	9 290	0 9680142	47370639	500
505	9 977	0 9990107	43078255	9 244	0 9658829	47386081	505
510	9 929	0 9968985	43092293	9 200	0 9637730	47401522	510
515	9 881	0 9948072	43106330	9 155	0 9616838	47416963	515
520	9 834	0 9927363	43120368	9 112	0 9596150	47432404	520
525	9 788	0 9906854	43134405	9 069	0 9575664	47447846	525
530	9 742	0 9886544	43148443	9 027	0 9555376	47463287	530
535	9 697	0 9866427	43162480	8 985	0 9535280	47478728	535
540	9 653	0 9846498	43176518	8 944	0 9515373	47494169	540
545	9 609	0 9826756	43190555	8 904	0 9495652	47509611	545
550	9 566	0 9807197	43204593	8 864	0 9476115	47525052	550
555	9 523	0 9787817	43218630	8 824	0 9456757	47540493	555
560	9 481	0 9768614	43232668	8 785	0 9437575	47555934	560
565	9 440	0 9749583	43246705	8 747	0 9418566	47571376	565
570	9 399	0 9730723	43260743	8 709	0 9399727	47586817	570
575	9 358	0 9712030	43274780	8 672	0 9381055	47602258	575
580	9 319	0 9693501	43288818	8 635	0 9362548	47617699	580
585	9 279	0 9675132	43302855	8 599	0 9344201	47633141	585
590	9 240	0 9656923	43316893	8 563	0 9326013	47648582	590
595	9 202	0 9638871	43330930	8 527	0 9307982	47664023	595
600	9 164	0 9620971	43344968	8 492	0 9290104	47679464	600
605	9 127	0 9603222	43359005	8 457	0 9272378	47694906	605
610	*9 090*	*0 9585621*	*43373043*	*8 423*	*0 9254797*	*47710347*	*610*
615	9 053	0 9568165	43387080	8 389	0 9237363	47725788	615
620	9 017	0 9550854	43401118	8 356	0 9220073	47741229	620
625	8 982	0 9533685	43415155	8 323	0 9202925	47756671	625
630	8 947	0 9516654	43429193	8 291	0 9185917	47772112	630
635	8 912	0 9499759	43443230	8 259	0 9169043	47787553	635
640	8 878	0 9482999	43457268	8 227	0 9152304	47802994	640
645	8 844	0 9466372	43471305	8 195	0 9135698	47818436	645
650	8 810	0 9449875	43485343	8 164	0 9119223	47833877	650
655	8 777	0 9433507	43499380	8 132	0 9101876	47849318	655
660	8 744	0 9417265	43513418	8 103	0 9086655	47864759	660
665	8 712	0 9401148	43527455	8 073	0 9070560	47880201	665
670	8 680	0 9385153	43541493	8 044	0 9054587	47895642	670
675	8 648	0 9369279	43555530	8 014	0 9038735	47911083	675
680	8 617	0 9353525	43569568	7 985	0 9023002	47926524	680
685	8 586	0 9337888	43583605	7 957	0 9007386	47941966	685
690	8 555	0 9322368	43597643	7 928	0 8991887	47957407	690
695	8 525	0 9306960	43611680	7 900	0 8976501	47972848	695
700	8 495	0 9291665	43625718	7 873	0 8961228	47988289	700

Sine of Inclination (1 over)	n = ·050			Sine of Inclination (1 over)	n = ·009		
	N	log. N	D		N	log. N	D
205	5·480	0·7387853	2·1118003	455	11·448	1·0587332	·38644092
210	5·415	0·7336303	2·1125021	460	11·386	1·0563849	·38656726
215	5·353	0·7285983	2·1132040	465	11·326	1·0540623	·38669360
220	5·293	0·7236839	2·1139059	470	11·266	1·0517649	·38681993
225	5·235	0·7188817	2·1146078	475	11·207	1·0494920	·38694627
230	5·178	0·7141866	2·1153096	480	11·149	1·0472432	·38707261
235	5·124	0·7095942	2·1160115	485	11·092	1·0450177	·38719895
240	5·071	0·7051001	2·1167134	490	11·036	1·0428156	·38732528
245	5·020	0·7007002	2·1174153	495	10·981	1·0406360	·38745162
250	4·970	0·6963908	2·1181171	500	10·926	1·0384785	·38757796
255	4·922	0·6921683	2·1188190	505	10·873	1·0363428	·38770430
260	4·876	0·6880294	2·1195209	510	10·820	1·0342283	·38783063
265	4·830	0·6839707	2·1202228	515	10·768	1·0321347	·38795697
270	4·786	0·6799892	2·1209246	520	10·717	1·0300615	·38808331
275	4·743	0·6760822	2·1216265	525	10·666	1·0280084	·38820965
280	4·702	0·6722471	2·1223284	530	10·616	1·0259752	·38833598
285	4·661	0·6684812	2·1230303	535	10·567	1·0239613	·38846232
290	4·621	0·6647821	2·1237321	540	10·519	1·0219663	·38858866
295	4·583	0·6611475	2·1244340	545	10·471	1·0199898	·38871500
300	4·545	0·6575753	2·1251359	550	10·424	1·0180316	·38884133
305	4·509	0·6540635	2·1258378	555	10·377	1·0160914	·38896767
310	4·473	0·6506099	2·1265396	560	10·332	1·0141689	·38909401
315	4·438	0·6472129	2·1272415	565	10·286	1·0122636	·38922035
320	4·404	0·6438706	2·1279434	570	10·242	1·0103753	·38934668
325	4·371	0·6405812	2·1286453	575	10·198	1·0085037	·38947302
330	4·339	0·6373433	2·1293471	580	10·154	1·0066485	·38959936
335	4·307	0·6341552	2·1300490	585	10·111	1·0048095	·38972570
340	4·276	0·6310155	2·1307509	590	10·069	1·0029863	·38985203
345	4·245	0·6279228	2·1314528	595	10·027	1·0011787	·38997837
350	4·216	0·6248756	2·1321546	600	9·986	0·9993866	·39010471
355	4·187	0·6218727	2·1328565	605	9·945	0·9976095	·39023105
360	4·158	0·6189129	2·1335584	610	9·905	0·9958472	·39035738
365	4·130	0·6159949	2·1342603	615	9·865	0·9940995	·39048372
370	4·103	0·6131178	2·1349621	620	9·826	0·9923661	·39061006
375	4·076	0·6102803	2·1356640	625	9·787	0·9906469	·39073640
380	4·050	0·6074814	2·1363659	630	9·749	0·9889416	·39086273
385	4·025	0·6047200	2·1370678	635	9·711	0·9872499	·39098907
390	3·999	0·6019952	2·1377696	640	9·673	0·9855716	·39111541
395	3·975	0·5993062	2·1384715	645	9·636	0·9839066	·39124175
400	3·950	0·5966519	2·1391734	650	9·600	0·9822547	·39136808
405	3·926	0·5940315	2·1398753	655	9·563	0·9806156	·39149442
410	3·903	0·5914442	2·1405771	660	9·528	0·9789892	·39162076
415	3·881	0·5888893	2·1412790	665	9·492	0·9773753	·39174710
420	3·858	0·5863658	2·1419809	670	9·457	0·9757736	·39187343
425	3·836	0·5838730	2·1426828	675	9·423	0·9741841	·39199977
430	3·814	0·5814104	2·1433846	680	9·389	0·9726064	·39212611
435	3·793	0·5789771	2·1440865	685	9·355	0·9710405	·39225245
440	3·772	0·5765724	2·1447884	690	9·322	0·9694862	·39237878
445	3·751	0·5741958	2·1454903	695	9·289	0·9679432	·39250512
450	3·731	0·5718465	2·1461921	700	9·256	0·9664115	·39263146

Sine of Inclination (1 over)	n = 010			n = 011			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
455	10 505	1 0213787	42937880	9 733	0 9882295	47231668	455
460	10 448	1 0190327	42951918	9 680	0 9858857	47247109	460
465	10 392	1 0167123	42965955	9 629	0 9835674	47262551	465
470	10 338	1 0144171	42979993	9 578	0 9812744	47277992	470
475	10 284	1 0121464	42994030	9 528	0 9790058	47293433	475
480	10 231	1 0098998	43008068	9 479	0 9767614	47308874	480
485	10 178	1 0076767	43022105	9 431	0 9745405	47324316	485
490	10 127	1 0054768	43036143	9 383	0 9723427	47339757	490
495	10 076	1 0032994	43050180	9 336	0 9701674	47355198	495
500	10 026	1 0011442	43064218	9 290	0 9680142	47370639	500
505	9 977	0 9990107	43078255	9 244	0 9658829	47386081	505
510	9 929	0 9968985	43092293	9 200	0 9637730	47401522	510
515	9 881	0 9948072	43106330	9 155	0 9616838	47416963	515
520	9 834	0 9927363	43120368	9 112	0 9596150	47432404	520
525	9 788	0 9906854	43134405	9 069	0 9575664	47447846	525
530	9 742	0 9886544	43148443	9 027	0 9555376	47463287	530
535	9 697	0 9866427	43162480	8 985	0 9535280	47478728	535
540	9 653	0 9846498	43176518	8 944	0 9515373	47494169	540
545	9 609	0 9826756	43190555	8 904	0 9495652	47509611	545
550	9 566	0 9807197	43204593	8 864	0 9476115	47525052	550
555	9 523	0 9787817	43218630	8 824	0 9456757	47540493	555
560	9 481	0 9768614	43232668	8 785	0 9437575	47555934	560
565	9 440	0 9749583	43246705	8 747	0 9418566	47571376	565
570	9 399	0 9730723	43260743	8 709	0 9399727	47586817	570
575	9 358	0 9712030	43274780	8 672	0 9381055	47602258	575
580	9 319	0 9693501	43288818	8 635	0 9362548	47617699	580
585	9 279	0 9675132	43302855	8 599	0 9344201	47633141	585
590	9 240	0 9656923	43316893	8 563	0 9326013	47648582	590
595	9 202	0 9638871	43330930	8 527	0 9307982	47664023	595
600	9 164	0 9620971	43344968	8 492	0 9290104	47679464	600
605	9 127	0 9603222	43359005	8 457	0 9272378	47694906	605
610	9 090	0 9585621	43373043	8 423	0 9254797	47710347	610
615	9 053	0 9568165	43387080	8 389	0 9237363	47725788	615
620	9 017	0 9550854	43401118	8 356	0 9220073	47741229	620
625	8 982	0 9533685	43415155	8 323	0 9202925	47756671	625
630	8 947	0 9516654	43429193	8 291	0 9185917	47772112	630
635	8 912	0 9499759	43443230	8 259	0 9169048	47787553	635
640	8 878	0 9482999	43457268	8 227	0 9152314	47802994	640
645	8 844	0 9466372	43471305	8 195	0 9135698	47818436	645
650	8 810	0 9449875	43485343	8 164	0 9119223	47833877	650
655	8 777	0 9433507	43499380	8 132	0 9101876	47849318	655
660	8 744	0 9417265	43513418	8 103	0 9086655	47864759	660
665	8 712	0 9401148	43527455	8 073	0 9070560	47880201	665
670	8 680	0 9385153	43541493	8 044	0 9054587	47895642	670
675	8 648	0 9369279	43555530	8 014	0 9038735	47911083	675
680	8 617	0 9353525	43569568	7 985	0 9023002	47926524	680
685	8 586	0 9337888	43583605	7 957	0 9007386	47941966	685
690	8 555	0 9322368	43597643	7 928	0 8991887	47957407	690
695	8 525	0 9306960	43611680	7 900	0 8976501	47972848	695
700	8 495	0 9291665	43625718	7 873	0 8961228	47988289	700

Sine of Inclination (1 over)	n = ·012			n = ·013			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
455	9·089	0·9585309	·51525456	8·545	0·9317108	·55819244	455
460	9·040	0·9561892	·51542301	8·499	0·9293711	·55837493	460
465	8·992	0·9538730	·51559146	8·454	0·9270569	·55855742	465
470	8·945	0·9515820	·51575991	8·409	0·9247679	·55873990	470
475	8·899	0·9493156	·51592836	8·366	0·9225035	·55892239	475
480	8·853	0·9470732	·51609681	8·323	0·9202632	·55910488	480
485	8·808	0·9448544	·51626526	8·280	0·9180464	·55928737	485
490	8·763	0·9426588	·51643371	8·239	0·9158526	·55946985	490
495	8·719	0·9404856	·51660216	8·197	0·9136814	·55965234	495
500	8·676	0·9383346	·51677061	8·157	0·9115324	·55983483	500
505	8·634	0·9362053	·51693906	8·117	0·9094051	·56001732	505
510	8·592	0·9340973	·51710751	8·078	0·9072992	·56019980	510
515	8·551	0·9320102	·51727596	8·039	0·9052141	·56038229	515
520	8·510	0·9299435	·51744441	8·001	0·9031494	·56056478	520
525	8·470	0·9278969	·51761286	7·964	0·9011048	·56074727	525
530	8·431	0·9258701	·51778131	7·926	0·8990800	·56092975	530
535	8·392	0·9238626	·51794976	7·890	0·8970745	·56111224	535
540	8·354	0·9218740	·51811821	7·854	0·8950879	·56129473	540
545	8·316	0·9199040	·51828666	7·818	0·8931199	·56147722	545
550	8·279	0·9179523	·51845511	7·783	0·8911702	·56165970	550
555	8·242	0·9160185	·51862356	7·749	0·8892384	·56184219	555
560	8·205	0·9141024	·51879201	7·715	0·8873243	·56202468	560
565	8·170	0·9122036	·51896046	7·681	0·8854275	·56220717	565
570	8·134	0·9103219	·51912891	7·648	0·8835477	·56238965	570
575	8·099	0·9084568	·51929736	7·615	0·8816846	·56257214	575
580	8·065	0·9066081	·51946581	7·583	0·8798379	·56275463	580
585	8·031	0·9047754	·51963426	7·551	0·8780073	·56293712	585
590	7·998	0·9029587	·51980271	7·520	0·8761926	·56311960	590
595	7·964	0·9011577	·51997116	7·488	0·8743935	·56330209	595
600	7·932	0·8993720	·52013961	7·458	0·8726098	·56348458	600
605	7·900	0·8976014	·52030806	7·427	0·8708412	·56366707	605
610	7·868	0·8958454	·52047651	7·398	0·8690872	·56384955	610
615	7·836	0·8941041	·52064496	7·368	0·8673479	·56403204	615
620	7·805	0·8923772	·52081341	7·339	0·8656230	·56421453	620
625	7·774	0·8906645	·52098186	7·310	0·8639122	·56439702	625
630	7·744	0·8889656	·52115031	7·281	0·8622154	·56457950	630
635	7·714	0·8872805	·52131876	7·253	0·8605322	·56476199	635
640	7·684	0·8856086	·52148721	7·225	0·8588623	·56494448	640
645	7·655	0·8839500	·52165566	7·198	0·8572057	·56512697	645
650	7·626	0·8823046	·52182411	7·171	0·8555623	·56530945	650
655	7·598	0·8806719	·52199256	7·144	0·8539316	·56549194	655
660	7·569	0·8790519	·52216101	7·117	0·8523137	·56567443	660
665	7·541	0·8774444	·52232946	7·091	0·8507082	·56585692	665
670	7·514	0·8758491	·52249791	7·065	0·8491150	·56603940	670
675	7·486	0·8742659	·52266636	7·039	0·8475338	·56622189	675
680	7·459	0·8726947	·52283481	7·014	0·8459645	·56640438	680
685	7·433	0·8711353	·52300326	6·989	0·8444071	·56658687	685
690	7·406	0·8695874	·52317171	6·964	0·8428612	·56676935	690
695	7·380	0·8680509	·52334016	6·939	0·8413266	·56695184	695
700	7·354	0·8665257	·52350861	6·915	0·8398033	·56713433	700

Sine of Inclination 1 over)	n = 014			n = 015			Sine of Inclination 1 over)
	N	log N	D	N	log N	D	
455	8 078	0 9073255	60113032	7 674	0 8850240	64406820	455
460	8 035	0 9049876	60132685	7 633	0 8826880	64427876	460
465	7 992	0 9026754	60152337	7 592	0 8803777	64448933	465
470	7 950	0 9003884	60171990	7 553	0 8780925	64469989	470
475	7 909	0 8981259	60191642	7 513	0 8758319	64491045	475
480	7 868	0 8958876	60211295	7 475	0 8735954	64512101	480
485	7 828	0 8936726	60230947	7 437	0 8713823	64533158	485
490	7 789	0 8914808	60250600	7 399	0 8691923	64554214	490
495	7 750	0 8893115	60270252	7 362	0 8670250	64575270	495
500	7 712	0 8871645	60289905	7 326	0 8648798	64596326	500
505	7 674	0 8850391	60309557	7 291	0 8627563	64617383	505
510	7 637	0 8829351	60329210	7 255	0 8606541	64638439	510
515	7 601	0 8808520	60348862	7 221	0 8585728	64659495	515
520	7 565	0 8787892	60368515	7 186	0 8565119	64680551	520
525	7 529	0 8767465	60388167	7 153	0 8544711	64701608	525
530	7 494	0 8747236	60407820	7 120	0 8524501	64722664	530
535	7 460	0 8727200	60427472	7 087	0 8504484	64743720	535
540	7 426	0 8707354	60447125	7 054	0 8484656	64764776	540
545	7 392	0 8687693	60466777	7 023	0 8465014	64785833	545
550	7 359	0 8668215	60486430	6 991	0 8445555	64806889	550
555	7 326	0 8648917	60506082	6 960	0 8426275	64827945	555
560	7 294	0 8629795	60525735	6 930	0 8407171	64849001	560
565	7 262	0 8610846	60545387	6 900	0 8388241	64870058	565
570	7 231	0 8592067	60565040	6 870	0 8369481	64891114	570
575	7 200	0 8573456	60584692	6 841	0 8350888	64912170	575
580	7 170	0 8555008	60604345	6 812	0 8332459	64933226	580
585	7 140	0 8536721	60623997	6 783	0 8314190	64954283	585
590	7 110	0 8518593	60643650	6 755	0 8296081	64975339	590
595	7 080	0 8500622	60663302	6 727	0 8278128	64996395	595
600	7 051	0 8482804	60682955	6 699	0 8260329	65017451	600
605	7 023	0 8465137	60702607	6 672	0 8242680	65038508	605
610	6 995	0 8447616	60722260	6 645	0 8225179	65059564	610
615	6 966	0 8430242	60741912	6 619	0 8207823	65080620	615
620	6 939	0 8413012	60761565	6 593	0 8190612	65101676	620
625	6 912	0 8395924	60781217	6 567	0 8173542	65122733	625
630	6 885	0 8378975	60800870	6 541	0 8156611	65143789	630
635	6 858	0 8362162	60820522	6 516	0 8139816	65164845	635
640	6 832	0 8345482	60840175	6 491	0 8123155	65185901	640
645	6 806	0 8328936	60859827	6 466	0 8106628	65206958	645
650	6 780	0 8312512	60879480	6 442	0 8090231	65228014	650
655	6 755	0 8296234	60899132	6 418	0 8073962	65249070	655
660	6 730	0 8280073	60918785	6 394	0 8057820	65270126	660
665	6 705	0 8264038	60938437	6 371	0 8041803	65291183	665
670	6 681	0 8248124	60958090	6 347	0 8025908	65312239	670
675	6 656	0 8232332	60977742	6 324	0 8010134	65333295	675
680	6 632	0 8216659	60997395	6 302	0 7994479	65354351	680
685	6 609	0 8201103	61017047	6 279	0 7978942	65375408	685
690	6 585	0 8185663	61036700	6 257	0 7963521	65396464	690
695	6 562	0 8170336	61056352	6 235	0 7948213	65417520	695
700	6 539	0 8155121	61076005	6 213	0 7933018	65438576	700

Sine of Inclination (1 over)	n = ·017			n = ·020			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
455	7·008	0·8455960	·72994396	6·259	0·7964890	·85875760	455
460	6·970	0·8432636	·73018260	6·225	0·7941614	·85903835	460
465	6·934	0·8409568	·73042124	6·192	0·7918595	·85931910	465
470	6·897	0·8386751	·73065987	6·160	0·7895827	·85959985	470
475	6·861	0·8364180	·73089851	6·128	0·7873305	·85988060	475
480	6·826	0·8341849	·73113715	6·097	0·7851023	·86016135	480
485	6·792	0·8319754	·73137579	6·066	0·7828976	·86044210	485
490	6·758	0·8297891	·73161442	6·036	0·7807162	·86072285	490
495	6·724	0·8276253	·73185306	6·006	0·7785572	·86100360	495
500	6·691	0·8254836	·73209170	5·976	0·7764204	·86128435	500
505	6·658	0·8233637	·73233034	5·947	0·7743054	·86156510	505
510	6·626	0·8212650	·73256897	5·918	0·7722116	·86184585	510
515	6·595	0·8191872	·73280761	5·890	0·7701387	·86212660	515
520	6·563	0·8171299	·73304625	5·863	0·7680862	·86240735	520
525	6·533	0·8150926	·73328489	5·835	0·7660538	·86268810	525
530	6·502	0·8130751	·73352352	5·808	0·7640412	·86296885	530
535	6·473	0·8110769	·73376216	5·782	0·7620479	·86324960	535
540	6·443	0·8090976	·73400080	5·755	0·7600735	·86353035	540
545	6·414	0·8071369	·73423944	5·730	0·7581176	·86381110	545
550	6·385	0·8051946	·73447807	5·704	0·7561801	·86409185	550
555	6·357	0·8032701	·73471671	5·679	0·7542605	·86437260	555
560	6·329	0·8013633	·73495535	5·654	0·7523586	·86465335	560
565	6·302	0·7994738	·73519399	5·630	0·7504739	·86493410	565
570	6·275	0·7976013	·73543262	5·605	0·7486062	·86521485	570
575	6·248	0·7957455	·73567126	5·582	0·7467553	·86549560	575
580	6·222	0·7939061	·73590990	5·558	0·7449208	·86577635	580
585	6·196	0·7920827	·73614854	5·535	0·7431023	·86605710	585
590	6·170	0·7902753	·73638717	5·512	0·7412997	·86633585	590
595	6·144	0·7884836	·73662581	5·489	0·7395128	·86661860	595
600	6·119	0·7867072	·73686445	5·467	0·7377413	·86689935	600
605	6·095	0·7849459	·73710309	5·445	0·7359849	·86718010	605
610	6·070	0·7831993	·73734173	5·423	0·7342431	·86746085	610
615	6·046	0·7814672	·73758036	5·402	0·7325158	·86774160	615
620	6·022	0·7797496	·73781900	5·380	0·7308031	·86802235	620
625	5·999	0·7780461	·73805764	5·359	0·7291045	·86830310	625
630	5·975	0·7763566	·73829627	5·339	0·7274198	·86858385	630
635	5·952	0·7746806	·73853491	5·318	0·7257487	·86886460	635
640	5·929	0·7730180	·73877355	5·298	0·7240910	·86914535	640
645	5·907	0·7713688	·73901219	5·278	0·7224465	·86942610	645
650	5·885	0·7697326	·73925082	5·258	0·7208152	·86970685	650
655	5·863	0·7681092	·73948946	5·238	0·7191967	·86998760	655
660	5·841	0·7664985	·73942810	5·219	0·7175909	·87026835	660
665	5·820	0·7649004	·73996674	5·200	0·7159975	·87054910	665
670	5·798	0·7633145	·74020537	5·181	0·7144164	·87082985	670
675	5·778	0·7617406	·74044401	5·162	0·7128473	·87111060	675
680	5·757	0·7601786	·74068265	5·144	0·7112902	·87139135	680
685	5·736	0·7586284	·74092129	5·126	0·7097449	·87167210	685
690	5·716	0·7570898	·74115992	5·108	0·7082111	·87195285	690
695	5·696	0·7555625	·74139856	5·090	0·7066886	·87223360	695
700	5·676	0·7540464	·74163720	5·072	0·7051774	·87251435	700

Sine of Inclination (1 over)	n = 0225			n = 0250			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
455	5 787	0 7624544	96610230	5 410	0 7331657	1 0734470	455
460	5 756	0 7601306	96641815	5 381	0 7308453	1 0737979	460
465	5 726	0 7578324	96673399	5 352	0 7285506	1 0741489	465
470	5 696	0 7555594	96704983	5 325	0 7262810	1 0744998	470
475	5 666	0 7533108	96736568	5 297	0 7240359	1 0748508	475
480	5 637	0 7510865	96768152	5 270	0 7218150	1 0752017	180
485	5 609	0 7488856	96799736	5 243	0 7196175	1 0755526	485
490	5 581	0 7467077	96831321	5 217	0 7174431	1 0759036	490
495	5 553	0 7445524	96862905	5 191	0 7152918	1 0762545	495
500	5 526	0 7424194	96894490	5 166	0 7131617	1 0766054	500
505	5 499	0 7403080	96926074	5 141	0 7110537	1 0769564	505
510	5 473	0 7382179	96957658	5 116	0 7089671	1 0773073	510
515	5 447	0 7361488	96989243	5 092	0 7069014	1 0776583	515
520	5 421	0 7341000	97020827	5 068	0 7048560	1 0780092	520
525	5 396	0 7320713	97052411	5 045	0 7028307	1 0783601	525
530	5 371	0 7300624	97083996	5 021	0 7008253	1 0787111	530
535	5 347	0 7280728	97115580	4 998	0 6988391	1 0790620	585
540	5 322	0 7261021	97147165	4 976	0 6968719	1 0794129	540
545	5 298	0 7241500	97178749	4 954	0 6949232	1 0797639	545
550	5 275	0 7222162	97210333	4 932	0 6929928	1 0801148	550
555	5 252	0 7203003	97241918	4 910	0 6910803	1 0804658	555
560	5 229	0 7184021	97273502	4 889	0 6891855	1 0808167	560
565	5 206	0 7165211	97305086	4 868	0 6873080	1 0811676	565
570	5 184	0 7146571	97336671	4 847	0 6854475	1 0815186	570
575	5 162	0 7128099	97368255	4 826	0 6836036	1 0818695	575
580	5 140	0 7109791	97399840	4 806	0 6817762	1 0822204	580
585	5 119	0 7091643	97431424	4 786	0 6799649	1 0825714	585
590	5 098	0 7073654	97463008	4 766	0 6781695	1 0829223	590
595	5 077	0 7055823	97494593	4 747	0 6763897	1 0832733	595
600	5 056	0 7038144	97526177	4 727	0 6746253	1 0836242	600
605	5 036	0 7020616	97557761	4 708	0 6728760	1 0839751	605
610	5 016	0 7003236	97589346	4 690	0 6711413	1 0843261	610
615	4 996	0 6986001	97620930	4 671	0 6694212	1 0846770	615
620	4 976	0 6968910	97652515	4 653	0 6677155	1 0850279	620
625	4 957	0 6951961	97684099	4 635	0 6660240	1 0853789	625
630	4 938	0 6935151	97715683	4 617	0 6643464	1 0857298	630
635	4 919	0 6918476	97747268	4 599	0 6626824	1 0860808	635
640	4 900	0 6901937	97778852	4 582	0 6610319	1 0864317	640
645	4 881	0 6885529	97810436	4 565	0 6593946	1 0867826	645
650	4 863	0 6869253	97842021	4 547	0 6577704	1 0871336	650
655	4 845	0 6853104	97873605	4 531	0 6561589	1 0874845	655
660	4 827	0 6837083	97905190	4 514	0 6545602	1 0878354	660
665	4 810	0 6821186	97936774	4 498	0 6529739	1 0881864	665
670	4 792	0 6805412	97968358	4 481	0 6513999	1 0885373	670
675	4 775	0 6789759	97999943	4 465	0 6498380	1 0888883	675
680	4 758	0 6774224	98031527	4 449	0 6482879	1 0892392	680
685	4 741	0 6758807	98063111	4 434	0 6467496	1 0895901	685
690	4 724	0 6743507	98094696	4 418	0 6452230	1 0899411	690
695	4 708	0 6728319	98126280	4 403	0 6437076	1 0902920	695
700	4 692	0 6713244	98157865	4 387	0 6422036	1 0906429	700

Sine of Inclination (1 over)	n = ·009			n = ·010			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
705	9·223	0·9648908	·39275780	8·465	0·9276480	·43639755	705
710	9·191	0·9633810	·39288413	8·436	0·9261406	·43653793	710
715	9·160	0·9618821	·39301047	8·407	0·9246439	·43667830	715
720	9·128	0·9603938	·39313681	8·378	0·9231578	·43681868	720
725	9·097	0·9589159	·39326315	8·350	0·9216821	·43695905	725
730	9·067	0·9574483	·39338948	8·322	0·9202168	·43709943	730
735	9·036	0·9559910	·39351582	8·294	0·9187617	·43723980	735
740	9·006	0·9545438	·39364216	8·266	0·9173167	·43738018	740
745	8·976	0·9531063	·39376850	8·239	0·9158815	·43752055	745
750	8·947	0·9516787	·39389483	8·212	0·9144561	·43766093	750
755	8·918	0·9502607	·39402117	8·185	0·9130403	·43780130	755
760	8·889	0·9488522	·39414751	8·159	0·9116341	·43794168	760
765	8·860	0·9474532	·39427385	8·133	0·9102373	·43808205	765
770	8·832	0·9460635	·39440018	8·107	0·9088497	·43822243	770
775	8·804	0·9446828	·39452652	8·081	0·9074713	·43836280	775
780	8·776	0·9433113	·39465286	8·056	0·9061020	·43850318	780
785	8·749	0·9419486	·39477920	8·030	0·9047416	·43864355	785
790	8·722	0·9405948	·39490553	8·006	0·9033900	·43878393	790
795	8·695	0·9392497	·39503187	7·981	0·9020471	·43892430	795
800	8·668	0·9379132	·39515821	7·956	0·9007127	·43906468	800
805	8·641	0·9365850	·39528455	7·932	0·8993868	·43920505	805
810	8·615	0·9352653	·39541088	7·908	0·8980692	·43934543	810
815	8·589	0·9339539	·39553722	7·884	0·8967601	·43948580	815
820	8·563	0·9326505	·39566356	7·861	0·8954590	·43962618	820
825	8·538	0·9313553	·39578990	7·837	0·8941660	·43976655	825
830	8·513	0·9300681	·39591623	7·814	0·8928812	·43990693	830
835	8·488	0·9287888	·39604257	7·791	0·8916041	·44004730	835
840	8·463	0·9275173	·39616891	7·768	0·8903348	·44018768	840
845	8·438	0·9262535	·39629525	7·746	0·8890731	·44032805	845
850	8·414	0·9249973	·39642158	7·724	0·8878191	·44046843	850
855	8·390	0·9237485	·39654792	7·701	0·8865726	·44060880	855
860	8·366	0·9225072	·39667426	7·680	0·8853334	·44074918	860
865	8·342	0·9212731	·39680060	7·658	0·8841016	·44088955	865
870	8·319	0·9200464	·39692693	7·636	0·8828771	·44102993	870
875	8·295	0·9188270	·39705327	7·615	0·8816599	·44117030	875
880	8·272	0·9176145	·39717961	7·594	0·8804496	·44131068	880
885	8·249	0·9164090	·39730595	7·573	0·8792463	·44145105	885
890	8·226	0·9152105	·39743228	7·552	0·8780500	·44159143	890
895	8·204	0·9140188	·39755862	7·531	0·8768606	·44173180	895
900	8·182	0·9128339	·39768496	7·511	0·8756779	·44187218	900
905	8·159	0·9116557	·39781130	7·490	0·8745020	·44201255	905
910	8·137	0·9104841	·39793763	7·470	0·8733327	·44215293	910
915	8·116	0·9093191	·39806397	7·450	0·8721698	·44229330	915
920	8·094	0·9081606	·39819031	7·430	0·8710135	·44243368	920
925	8·073	0·9070084	·39831665	7·411	0·8698635	·44257405	925
930	8·051	0·9058626	·39844298	7·391	0·8687200	·44271443	930
935	8·030	0·9047232	·39856932	7·372	0·8675827	·44285480	935
940	8·009	0·9035899	·39869566	7·353	0·8664516	·44299518	940
945	7·988	0·9024627	·39882200	7·334	0·8653267	·44313555	945
950	7·968	0·9013416	·39894833	7·315	0·8642078	·44327593	950

Sine of Inclination (over)	n = ·011			n = ·012			Sine of Inclination (over)
	N	log N	D	N	log N	D	
705	7 845	0 8946064	48003731	7 828	0 8950111	52007700	705
710	7 818	0 8931011	48010172	7 801	0 8935082	52014551	710
715	7 791	0 8916066	48031613	7 278	0 8920157	52101800	715
720	7 765	0 8901227	48050054	7 250	0 8905338	52118211	720
725	7 738	0 8886491	48065496	7 220	0 8890624	52185086	725
730	7 712	0 8871858	48080937	7 201	0 8876011	52151011	730
735	7 687	0 8857329	48096378	7 180	0 8861502	52168776	735
740	7 661	0 8842901	48111819	7 157	0 8847091	52185621	740
745	7 636	0 8828571	48127261	7 133	0 8832785	52202486	745
750	7 611	0 8814338	48142702	7 110	0 8818578	52219111	750
755	7 586	0 8800201	48158143	7 087	0 8804457	52236156	755
760	7 562	0 8786160	48173584	7 064	0 8790437	52253001	760
765	7 537	0 8772214	48189026	7 041	0 8776511	52270846	765
770	7 513	0 8758359	48204467	7 019	0 8762677	52288611	770
775	7 490	0 8744597	48219908	6 997	0 8748936	52306536	775
780	7 466	0 8730925	48235349	6 975	0 8735281	52324381	780
785	7 443	0 8717342	48250791	6 953	0 8721722	52342226	785
790	7 420	0 8703848	48266232	6 931	0 8708248	52360071	790
795	7 397	0 8690440	48281673	6 910	0 8694861	52378016	795
800	7 374	0 8677118	48297114	6 889	0 8681560	52396761	800
805	7 352	0 8663881	48312556	6 868	0 8668343	52414606	805
810	7 329	0 8650727	48327997	6 847	0 8655210	52432451	810
815	7 307	0 8637656	48343438	6 827	0 8642159	52450296	815
820	7 286	0 8624667	48358879	6 806	0 8629190	52468141	820
825	7 264	0 8611758	48374321	6 786	0 8616302	52486086	825
830	7 243	0 8598930	48389762	6 766	0 8603496	52503931	830
835	7 221	0 8586181	48405203	6 746	0 8590770	52521776	835
840	7 200	0 8573509	48420644	6 727	0 8578123	52539621	840
845	7 179	0 8560913	48436086	6 707	0 8565555	52557566	845
850	7 159	0 8548393	48451527	6 688	0 8553062	52575411	850
855	7 138	0 8535948	48466968	6 669	0 8540646	52593256	855
860	7 118	0 8523577	48482409	6 650	0 8528305	52611101	860
865	7 098	0 8511281	48497851	6 631	0 8516038	52628946	865
870	7 078	0 8499058	48513292	6 613	0 8503845	52646791	870
875	7 058	0 8486909	48528733	6 594	0 8491726	52664736	875
880	7 038	0 8474833	48544174	6 576	0 8479679	52682581	880
885	7 018	0 8462829	48559616	6 558	0 8467705	52700426	885
890	6 998	0 8450897	48575057	6 540	0 8455803	52718271	890
895	6 979	0 8439036	48590498	6 522	0 8443973	52736116	895
900	6 959	0 8427246	48605939	6 504	0 8432214	52753961	900
905	6 940	0 8415526	48621381	6 486	0 8420526	52771806	905
910	6 921	0 8403876	48636822	6 469	0 8408908	52789651	910
915	6 902	0 8392295	48652263	6 451	0 8397360	52807496	915
920	6 883	0 8380783	48667704	6 434	0 8385881	52825341	920
925	6 864	0 8369339	48683146	6 417	0 8374471	52843186	925
930	6 845	0 8357963	48698587	6 400	0 8363129	52861031	930
935	6 827	0 8346654	48714028	6 383	0 8351855	52878876	935
940	6 808	0 8335412	48729469	6 366	0 8340648	52896721	940
945	6 790	0 8324236	48744911	6 349	0 8329508	52914566	945
950	6 772	0 8313126	48760352	6 333	0 8318434	52932411	950
955	6 754	0 8302081	48775793	6 316	0 8307426	52950256	955
960	6 736	0 8291101	48791234	6 300	0 8296483	52968101	960
965	6 718	0 8280185	48806676	6 284	0 8285605	52985946	965
970	6 700	0 8269333	48822117	6 268	0 8274791	53003791	970
975	6 683	0 8258544	48837558	6 252	0 8264041	53021636	975
980	6 665	0 8247818	48852999	6 236	0 8253354	53039481	980
985	6 648	0 8237154	48868441	6 220	0 8242730	53057326	985
990	6 631	0 8226552	48883882	6 205	0 8232169	53075171	990
995	6 614	0 8216012	48899323	6 189	0 8221670	53093016	995
1000	6 597	0 8205533	48914764	6 174	0 8211233	53110861	1000

Sine of Inclination (1 over)	n = ·009			n = ·010			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
705	9·223	0·9648908	·39275780	8·465	0·9276480	·43639755	705
710	9·191	0·9633810	·39288413	8·436	0·9261406	·43653793	710
715	9·160	0·9618821	·39301047	8·407	0·9246439	·43667830	715
720	9·128	0·9603938	·39313681	8·378	0·9231578	·43681868	720
725	9·097	0·9589159	·39326315	8·350	0·9216821	·43695905	725
730	9·067	0·9574483	·39338948	8·322	0·9202168	·43709943	730
735	9·036	0·9559910	·39351582	8·294	0·9187617	·43723980	735
740	9·006	0·9545438	·39364216	8·266	0·9173167	·43738018	740
745	8·976	0·9531063	·39376850	8·239	0·9158815	·43752055	745
750	8·947	0·9516787	·39389483	8·212	0·9144561	·43766093	750
755	8·918	0·9502607	·39402117	8·185	0·9130403	·43780130	755
760	8·889	0·9488522	·39414751	8·159	0·9116341	·43794168	760
765	8·860	0·9474532	·39427385	8·133	0·9102373	·43808205	765
770	8·832	0·9460635	·39440018	8·107	0·9088497	·43822243	770
775	8·804	0·9446828	·39452652	8·081	0·9074713	·43836280	775
780	8·776	0·9433113	·39465286	8·056	0·9061020	·43850318	780
785	8·749	0·9419486	·39477920	8·030	0·9047416	·43864355	785
790	8·722	0·9405948	·39490553	8·006	0·9033900	·43878393	790
795	8·695	0·9392497	·39503187	7·981	0·9020471	·43892430	795
800	8·668	0·9379132	·39515821	7·956	0·9007127	·43906468	800
805	8·641	0·9365850	·39528455	7·932	0·8993868	·43920505	805
810	8·615	0·9352653	·39541088	7·908	0·8980692	·43934543	810
815	8·589	0·9339539	·39553722	7·884	0·8967601	·43948580	815
820	8·563	0·9326505	·39566356	7·861	0·8954590	·43962618	820
825	8·538	0·9313553	·39578990	7·837	0·8941660	·43976655	825
830	8·513	0·9300681	·39591623	7·814	0·8928812	·43990693	830
835	8·488	0·9287888	·39604257	7·791	0·8916041	·44004730	835
840	8·463	0·9275173	·39616891	7·768	0·8903348	·44018768	840
845	8·438	0·9262535	·39629525	7·746	0·8890731	·44032805	845
850	8·414	0·9249973	·39642158	7·724	0·8878191	·44046843	850
855	8·390	0·9237485	·39654792	7·701	0·8865726	·44060880	855
860	8·366	0·9225072	·39667426	7·680	0·8853334	·44074918	860
865	8·342	0·9212731	·39680060	7·658	0·8841016	·44088955	865
870	8·319	0·9200464	·39692693	7·636	0·8828771	·44102993	870
875	8·295	0·9188270	·39705327	7·615	0·8816599	·44117030	875
880	8·272	0·9176145	·39717961	7·594	0·8804496	·44131068	880
885	8·249	0·9164090	·39730595	7·573	0·8792463	·44145105	885
890	8·226	0·9152105	·39743228	7·552	0·8780500	·44159143	890
895	8·204	0·9140188	·39755862	7·531	0·8768606	·44173180	895
900	8·182	0·9128339	·39768496	7·511	0·8756779	·44187218	900
905	8·159	0·9116557	·39781130	7·490	0·8745020	·44201255	905
910	8·137	0·9104841	·39793763	7·470	0·8733327	·44215293	910
915	8·116	0·9093191	·39806397	7·450	0·8721698	·44229330	915
920	8·094	0·9081606	·39819031	7·430	0·8710135	·44243368	920
925	8·073	0·9070084	·39831665	7·411	0·8698635	·44257405	925
930	8·051	0·9058626	·39844298	7·391	0·8687200	·44271443	930
935	8·030	0·9047232	·39856932	7·372	0·8675827	·44285480	935
940	8·009	0·9035899	·39869566	7·353	0·8664516	·44299518	940
945	7·988	0·9024627	·39882200	7·334	0·8653267	·44313555	945
950	7·968	0·9013416	·39894833	7·315	0·8642078	·44327593	950

Sine of Inclination (1 over)	n = ·011			n = ·012			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
705	7 845	0 8946064	48003731	7 328	0 8650114	52367706	705
710	7 818	0 8931011	48019172	7 303	0 8635082	52384551	710
715	7 791	0 8916066	48034613	7 278	0 8620157	52401396	715
720	7 765	0 8901227	48050054	7 253	0 8605338	52418241	720
725	7 738	0 8886491	48065496	7 229	0 8590623	52435086	725
730	7 712	0 8871858	48080937	7 204	0 8576011	52451931	730
735	7 687	0 8857329	48096378	7 180	0 8561502	52468776	735
740	7 661	0 8842901	48111819	7 157	0 8547094	52485621	740
745	7 636	0 8828571	48127261	7 133	0 8532785	52502466	745
750	7 611	0 8814338	48142702	7 110	0 8518573	52519311	750
755	7 586	0 8800201	48158143	7 087	0 8504457	52536156	755
760	7 562	0 8786160	48173584	7 064	0 8490437	52553001	760
765	7 537	0 8772214	48189026	7 041	0 8476511	52569846	765
770	7 513	0 8758359	48204467	7 019	0 8462677	52586691	770
775	7 490	0 8744597	48219908	6 997	0 8448935	52603536	775
780	7 466	0 8730925	48235349	6 975	0 8435284	52620381	780
785	7 443	0 8717342	48250791	6 953	0 8421722	52637226	785
790	7 420	0 8703848	48266232	6 931	0 8408248	52654071	790
795	7 397	0 8690440	48281673	6 910	0 8394861	52670916	795
800	7 374	0 8677118	48297114	6 889	0 8381560	52687761	800
805	7 352	0 8663881	48312556	6 868	0 8368343	52704606	805
810	7 329	0 8650727	48327997	6 847	0 8355210	52721451	810
815	7 307	0 8637656	48343438	6 827	0 8342159	52738296	815
820	7 286	0 8624667	48358879	6 806	0 8329190	52755141	820
825	7 264	0 8611758	48374321	6 786	0 8316302	52771986	825
830	7 243	0 8598930	48389762	6 766	0 8303496	52788831	830
835	7 221	0 8586181	48405203	6 746	0 8290766	52805676	835
840	7 200	0 8573509	48420644	6 727	0 8278115	52822521	840
845	7 179	0 8560913	48436086	6 707	0 8265541	52839366	845
850	7 159	0 8548395	48451527	6 688	0 8253042	52856211	850
855	7 138	0 8535952	48466968	6 669	0 8240620	52873056	855
860	7 118	0 8523582	48482409	6 650	0 8228270	52889901	860
865	7 098	0 8511284	48497851	6 631	0 8215993	52906746	865
870	7 078	0 8499060	48513292	6 613	0 8203791	52923591	870
875	7 058	0 8486910	48528733	6 594	0 8191660	52940436	875
880	7 039	0 8474829	48544174	6 576	0 8179599	52957281	880
885	7 019	0 8462818	48559616	6 558	0 8167609	52974126	885
890	7 000	0 8450876	48575057	6 540	0 8155687	52990971	890
895	6 981	0 8439002	48590498	6 522	0 8143834	53007816	895
900	6 962	0 8427197	48605939	6 504	0 8132049	53024661	900
905	6 943	0 8415460	48621381	6 487	0 8120332	53041506	905
910	6 924	0 8403788	48636822	6 469	0 8108681	53058351	910
915	6 906	0 8392179	48652263	6 452	0 8097095	53075196	915
920	6 888	0 8380637	48667704	6 435	0 8085573	53092041	920
925	6 869	0 8369159	48683146	6 418	0 8074115	53108886	925
930	6 851	0 8357746	48698587	6 401	0 8062721	53125731	930
935	6 833	0 8346395	48714028	6 385	0 8051391	53142576	935
940	6 816	0 8335107	48729469	6 368	0 8040123	53159421	940
945	6 798	0 8323876	48744911	6 352	0 8028914	53176266	945
950	6 781	0 8312709	48760352	6 335	0 8017766	53193111	950

Sine of Inclination (1 over)	n = ·013			n = ·014			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
705	6·891	0·8382910	·56731682	6·516	0·8140019	·61095657	705
710	6·867	0·8367898	·56749930	6·494	0·8125025	·61115310	710
715	6·844	0·8352993	·56768179	6·472	0·8110140	·61134962	715
720	6·821	0·8338194	·56786428	6·450	0·8095360	·61154615	720
725	6·798	0·8323499	·56804677	6·428	0·8080684	·61174267	725
730	6·775	0·8308907	·56822925	6·406	0·8066112	·61193920	730
735	6·752	0·8294418	·56841174	6·385	0·8051642	·61213572	735
740	6·730	0·8280030	·56859423	6·364	0·8037273	·61233225	740
745	6·708	0·8265740	·56877672	6·343	0·8023002	·61252877	745
750	6·686	0·8251548	·56895920	6·322	0·8008830	·61272530	750
755	6·664	0·8237452	·56914169	6·302	0·7994753	·61292182	755
760	6·643	0·8223452	·56932418	6·282	0·7980772	·61311835	760
765	6·621	0·8209546	·56950667	6·262	0·7966885	·61331487	765
770	6·600	0·8195732	·56968915	6·242	0·7953089	·61351140	770
775	6·580	0·8182010	·56987164	6·222	0·7939386	·61370792	775
780	6·559	0·8168379	·57005413	6·203	0·7925774	·61390445	780
785	6·539	0·8154837	·57023662	6·183	0·7912251	·61410097	785
790	6·518	0·8141382	·57041910	6·164	0·7898816	·61429750	790
795	6·498	0·8128014	·57060159	6·145	0·7885468	·61449402	795
800	6·478	0·8114733	·57078408	6·127	0·7872206	·61469055	800
805	6·459	0·8101536	·57096657	6·108	0·7859028	·61488707	805
810	6·439	0·8088423	·57114905	6·090	0·7845934	·61508360	810
815	6·420	0·8075392	·57133154	6·071	0·7832922	·61528012	815
820	6·401	0·8062443	·57151403	6·053	0·7819992	·61547665	820
825	6·382	0·8049575	·57169652	6·036	0·7807139	·61567317	825
830	6·363	0·8036787	·57187900	6·018	0·7794375	·61586970	830
835	6·345	0·8024079	·57206149	6·000	0·7781685	·61606622	835
840	6·326	0·8011448	·57224398	5·983	0·7769073	·61626275	840
845	6·308	0·7998892	·57242647	5·966	0·7756538	·61645927	845
850	6·290	0·7986414	·57260895	5·949	0·7744078	·61665580	850
855	6·272	0·7974011	·57279144	5·932	0·7731693	·61685232	855
860	6·254	0·7961681	·57297393	5·915	0·7719382	·61704885	860
865	6·237	0·7949424	·57315642	5·898	0·7707145	·61724537	865
870	6·219	0·7937241	·57333890	5·882	0·7694980	·61744190	870
875	6·202	0·7925130	·57362139	5·865	0·7682889	·61763842	875
880	6·185	0·7913090	·57370388	5·849	0·7670867	·61783495	880
885	6·168	0·7901119	·57388637	5·833	0·7658916	·61803147	885
890	6·151	0·7889217	·57406885	5·817	0·7647033	·61822800	890
895	6·134	0·7877384	·57425134	5·801	0·7635219	·61842452	895
900	6·117	0·7865619	·57443383	5·786	0·7623474	·61862105	900
905	6·101	0·7853921	·57461632	5·770	0·7611795	·61881757	905
910	6·085	0·7842290	·57479880	5·755	0·7600182	·61901410	910
915	6·068	0·7830723	·57498129	5·739	0·7588634	·61921062	915
920	6·052	0·7819221	·57516378	5·724	0·7577151	·61940715	920
925	6·036	0·7807783	·57534627	5·709	0·7565732	·61960367	925
930	6·021	0·7796409	·57552875	5·694	0·7554377	·61980020	930
935	6·005	0·7785098	·57571124	5·679	0·7543085	·61999672	935
940	5·989	0·7773849	·57589373	5·665	0·7531855	·62019325	940
945	5·974	0·7762661	·57607622	5·650	0·7520686	·62038977	945
950	5·959	0·7751534	·57625870	5·636	0·7509578	·62058630	950

Sine of Inclination (1 over)	n = 015			n = 017			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
705	6 191	0 7917933	65459633	5 656	0 7525414	74187584	705
710	6 170	0 7902958	65480689	5 637	0 7510474	74211447	710
715	6 149	0 7888091	65501745	5 618	0 7495642	74235311	715
720	6 128	0 7873329	65522801	5 599	0 7480916	74259175	720
725	6 108	0 7858672	65543858	5 580	0 7466294	74283039	725
730	6 087	0 7844118	65564914	5 561	0 7451775	74306902	730
735	6 067	0 7829669	65585970	5 543	0 7437359	74330766	735
740	6 047	0 7815316	65607026	5 525	0 7423043	74354630	740
745	6 027	0 7801064	65628083	5 507	0 7408826	74378494	745
750	6 007	0 7786909	65649139	5 489	0 7394706	74402357	750
755	5 988	0 7772851	65670195	5 471	0 7380683	74426221	755
760	5 969	0 7758888	65691251	5 454	0 7366755	74450085	760
765	5 950	0 7745020	65712308	5 436	0 7352922	74473949	765
770	5 931	0 7731248	65733364	5 419	0 7339180	74497812	770
775	5 912	0 7717559	65754420	5 402	0 7325531	74521676	775
780	5 894	0 7703965	65775476	5 385	0 7311972	74545540	780
785	5 876	0 7690461	65796533	5 368	0 7298503	74569404	785
790	5 857	0 7677044	65817589	5 352	0 7285121	74593267	790
795	5 839	0 7663714	65838645	5 336	0 7271826	74617131	795
800	5 822	0 7650470	65859701	5 319	0 7258617	74640995	800
805	5 804	0 7637311	65880758	5 303	0 7245492	74664859	805
810	5 787	0 7624235	65901814	5 287	0 7232451	74688722	810
815	5 769	0 7611242	65922870	5 272	0 7219493	74712586	815
820	5 752	0 7598330	65943926	5 256	0 7206616	74736450	820
825	5 735	0 7585499	65964983	5 241	0 7193820	74760314	825
830	5 718	0 7572749	65986039	5 225	0 7181105	74784177	830
835	5 702	0 7560078	66007095	5 210	0 7168470	74808041	835
840	5 685	0 7547484	66028151	5 195	0 7155911	74831905	840
845	5 669	0 7534967	66049208	5 180	0 7143429	74855769	845
850	5 653	0 7522526	66070264	5 165	0 7131022	74879632	850
855	5 637	0 7510160	66091320	5 151	0 7118691	74903496	855
860	5 621	0 7497868	66112376	5 136	0 7106434	74927360	860
865	5 605	0 7485648	66133433	5 122	0 7094250	74951224	865
870	5 589	0 7473502	66154489	5 108	0 7082138	74975087	870
875	5 574	0 7461429	66175545	5 093	0 7070100	74998951	875
880	5 558	0 7449426	66196601	5 079	0 7058131	75022815	880
885	5 543	0 7437493	66217658	5 066	0 7046233	75046679	885
890	5 528	0 7425628	66238714	5 052	0 7034404	75070542	890
895	5 513	0 7413833	66259770	5 038	0 7022643	75094406	895
900	5 498	0 7402106	66280826	5 025	0 7010951	75118270	900
905	5 483	0 7390445	66301883	5 011	0 6999325	75142134	905
910	5 469	0 7378851	66322939	4 998	0 6987766	75165997	910
915	5 454	0 7367321	66343995	4 985	0 6976271	75189861	915
920	5 440	0 7355857	66365051	4 971	0 6964841	75213725	920
925	5 426	0 7344456	66386108	4 958	0 6953475	75237589	925
930	5 411	0 7333120	66407164	4 946	0 6942173	75261452	930
935	5 397	0 7321846	66428220	4 933	0 6930934	75285316	935
940	5 383	0 7310635	66449276	4 920	0 6919758	75309180	940
945	5 370	0 7299484	66470333	4 908	0 6908642	75333044	945
950	5 356	0 7288394	66491389	4 895	0 6897587	75356707	950

Sine of Inclination (1 over)	n = ·020			n = ·0225			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
705	5·054	0·7036773	·87279510	4·675	0·6698279	·98189449	705
710	5·037	0·7021881	·87307585	4·659	0·6683424	·98221033	710
715	5·020	0·7007097	·87335660	4·644	0·6668677	·98252618	715
720	5·003	0·6992419	·87363735	4·628	0·6654036	·98284202	720
725	4·986	0·6977845	·87391810	4·613	0·6639499	·98315786	725
730	4·970	0·6963375	·87419885	4·597	0·6625065	·98349371	730
735	4·953	0·6949007	·87447960	4·582	0·6610733	·98378955	735
740	4·937	0·6934739	·87476035	4·567	0·6596503	·98410540	740
745	4·921	0·6920570	·87504110	4·552	0·6582371	·98442124	745
750	4·905	0·6906499	·87532185	4·538	0·6568336	·98473708	750
755	4·889	0·6892524	·87560260	4·523	0·6554398	·98505293	755
760	4·874	0·6878645	·87588335	4·509	0·6540555	·98536877	760
765	4·858	0·6864860	·87616410	4·494	0·6526807	·98568461	765
770	4·843	0·6851166	·87644485	4·480	0·6513151	·98600046	770
775	4·828	0·6837565	·87672560	4·466	0·6499586	·98631630	775
780	4·813	0·6824055	·87700635	4·453	0·6486112	·98663215	780
785	4·798	0·6810633	·87728710	4·439	0·6472727	·98694799	785
790	4·783	0·6797300	·87756785	4·425	0·6459430	·98726383	790
795	4·769	0·6784053	·87784860	4·412	0·6446220	·98757968	795
800	4·754	0·6770892	·87812935	4·399	0·6433097	·98789552	800
805	4·740	0·6757816	·87841010	4·385	0·6420057	·98821136	805
810	4·726	0·6744823	·87869085	4·372	0·6407100	·98852721	810
815	4·712	0·6731913	·87897160	4·359	0·6394227	·98884305	815
820	4·698	0·6719084	·87925235	4·347	0·6381435	·98915890	820
825	4·684	0·6706336	·87953310	4·334	0·6368724	·98947474	825
830	4·671	0·6693670	·87981385	4·321	0·6356094	·98979058	830
835	4·657	0·6681082	·88009460	4·309	0·6343543	·99010643	835
840	4·644	0·6668571	·88037535	4·296	0·6331068	·99042227	840
845	4·630	0·6656136	·88065610	4·284	0·6318670	·99073811	845
850	4·617	0·6643778	·88093685	4·272	0·6306349	·99105396	850
855	4·604	0·6631495	·88121760	4·260	0·6294102	·99136980	855
860	4·591	0·6619286	·88149835	4·248	0·6281930	·99168565	860
865	4·578	0·6607150	·88177910	4·236	0·6269830	·99200149	865
870	4·566	0·6595086	·88205985	4·225	0·6257803	·99231733	870
875	4·553	0·6583096	·88234060	4·213	0·6245849	·99263318	875
880	4·541	0·6571176	·88262135	4·201	0·6233966	·99294902	880
885	4·528	0·6559326	·88290210	4·190	0·6222152	·99326486	885
890	4·516	0·6547544	·88318285	4·179	0·6210407	·99358071	890
895	4·504	0·6535831	·88346360	4·167	0·6198731	·99389655	895
900	4·492	0·6524187	·88374435	4·156	0·6187123	·99421240	900
905	4·480	0·6512610	·88402510	4·145	0·6175582	·99452824	905
910	4·468	0·6501098	·88430585	4·134	0·6164106	·99484408	910
915	4·456	0·6489651	·88458660	4·124	0·6152696	·99515993	915
920	4·445	0·6478269	·88486735	4·113	0·6141351	·99547577	920
925	4·433	0·6466951	·88514810	4·102	0·6130070	·99579161	925
930	4·422	0·6455698	·88542885	4·092	0·6118853	·99610746	930
935	4·410	0·6444507	·88570960	4·081	0·6107698	·99642330	935
940	4·399	0·6433378	·88599035	4·071	0·6096605	·99673915	940
945	4·388	0·6422310	·88627110	4·060	0·6085574	·99705499	945
950	4·377	0·6411303	·88655185	4·050	0·6074603	·99737083	950

Sine of Inclination (1 over)	n = ·0250			n = 0275			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
705	4 372	0 6407105	1 0909939	4 124	0 6153437	1 2000933	705
710	4 357	0 6392284	1 0913448	4 110	0 6138648	1 2004793	710
715	4 343	0 6377571	1 0916958	4 096	0 6123966	1 2008653	715
720	4 328	0 6362964	1 0920467	4 083	0 6109391	1 2012514	720
725	4 314	0 6348461	1 0923976	4 069	0 6094920	1 2016374	725
730	4 299	0 6334061	1 0927486	4 056	0 6080551	1 2020234	730
735	4 285	0 6319764	1 0930995	4 042	0 6066285	1 2024095	735
740	4 271	0 6305567	1 0934504	4 029	0 6052121	1 2027955	740
745	4 257	0 6291468	1 0938014	4 016	0 6038054	1 2031815	745
750	4 244	0 6277468	1 0941523	4 003	0 6024085	1 2035675	750
755	4 230	0 6263564	1 0945033	3 990	0 6010212	1 2039536	755
760	4 217	0 6249756	1 0948542	3 978	0 5996435	1 2043396	760
765	4 203	0 6236041	1 0952051	3 965	0 5982752	1 2047256	765
770	4 190	0 6222418	1 0955560	3 953	0 5969161	1 2051117	770
775	4 177	0 6208887	1 0959070	3 941	0 5955661	1 2054977	775
780	4 164	0 6195448	1 0962579	3 928	0 5942253	1 2058837	780
785	4 152	0 6182097	1 0966089	3 916	0 5928934	1 2062698	785
790	4 139	0 6168834	1 0969598	3 905	0 5915702	1 2066558	790
795	4 126	0 6155658	1 0973108	3 893	0 5902557	1 2070418	795
800	4 114	0 6142568	1 0976617	3 881	0 5889499	1 2074279	800
805	4 102	0 6129562	1 0980126	3 869	0 5876524	1 2078139	805
810	4 089	0 6116640	1 0983636	3 858	0 5863634	1 2081999	810
815	4 077	0 6103800	1 0987145	3 847	0 5850826	1 2085860	815
820	4 065	0 6091042	1 0990654	3 835	0 5838099	1 2089720	820
825	4 054	0 6078365	1 0994164	3 824	0 5825453	1 2093580	825
830	4 042	0 6065768	1 0997673	3 813	0 5812888	1 2097440	830
835	4 030	0 6053251	1 1001183	3 802	0 5800402	1 2101301	835
840	4 019	0 6040810	1 1004692	3 791	0 5787993	1 2105161	840
845	4 007	0 6028446	1 1008201	3 781	0 5775660	1 2109021	845
850	3 996	0 6016159	1 1011711	3 770	0 5763404	1 2112882	850
855	3 985	0 6003945	1 1015220	3 759	0 5751223	1 2116742	855
860	3 974	0 5991807	1 1018729	3 749	0 5739115	1 2120602	860
865	3 963	0 5979742	1 1022239	3 739	0 5727081	1 2124463	865
870	3 952	0 5967749	1 1025748	3 728	0 5715119	1 2128323	870
875	3 941	0 5955829	1 1029258	3 718	0 5703231	1 2132183	875
880	3 930	0 5943979	1 1032767	3 708	0 5691412	1 2136044	880
885	3 919	0 5932198	1 1036276	3 698	0 5679663	1 2139904	885
890	3 909	0 5920487	1 1039786	3 688	0 5667983	1 2143764	890
895	3 898	0 5908845	1 1043295	3 678	0 5656372	1 2147625	895
900	3 888	0 5897271	1 1046804	3 668	0 5644829	1 2151485	900
905	3 878	0 5885763	1 1050314	3 659	0 5633353	1 2155345	905
910	3 868	0 5874322	1 1053823	3 649	0 5621943	1 2159205	910
915	3 857	0 5862946	1 1057333	3 640	0 5610598	1 2163066	915
920	3 847	0 5851634	1 1060842	3 630	0 5599318	1 2166926	920
925	3 837	0 5840386	1 1064351	3 621	0 5588101	1 2170786	925
930	3 828	0 5829203	1 1067861	3 612	0 5576949	1 2174647	930
935	3 818	0 5818082	1 1071370	3 602	0 5565859	1 2178507	935
940	3 808	0 5807023	1 1074879	3 593	0 5554832	1 2182367	940
945	3 798	0 5796025	1 1078389	3 584	0 5543865	1 2186228	945
950	3 789	0 5785088	1 1081898	3 575	0 5532959	1 2190088	950

Sine of Inclination (1 over)	n = ·030			n = ·035			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
705	3·918	0·5930107	1·3091927	3·593	0·5554169	1·5273914	705
710	3·904	0·5915347	1·3096138	3·581	0·5539462	1·5278827	710
715	3·891	0·5900695	1·3100349	3·569	0·5524862	1·5283741	715
720	3·878	0·5886149	1·3104560	3·557	0·5510369	1·5288654	720
725	3·865	0·5871707	1·3108772	3·545	0·5495980	1·5293567	725
730	3·852	0·5857368	1·3112983	3·533	0·5481693	1·5298480	730
735	3·840	0·5843132	1·3117194	3·522	0·5467510	1·5303393	735
740	3·827	0·5828996	1·3121405	3·510	0·5453428	1·5308306	740
745	3·815	0·5814959	1·3125617	3·499	0·5439443	1·5313219	745
750	3·803	0·5801019	1·3129828	3·488	0·5425556	1·5318132	750
755	3·791	0·5787175	1·3134039	3·477	0·5411766	1·5323046	755
760	3·779	0·5773428	1·3138250	3·466	0·5398071	1·5327959	760
765	3·767	0·5759774	1·3142462	3·455	0·5384470	1·5332872	765
770	3·755	0·5746212	1·3146673	3·444	0·5370961	1·5337785	770
775	3·743	0·5732742	1·3150884	3·434	0·5357543	1·5342698	775
780	3·732	0·5719363	1·3155095	3·423	0·5344217	1·5347611	780
785	3·721	0·5706073	1·3159307	3·413	0·5320980	1·5352524	785
790	3·709	0·5692871	1·3163518	3·402	0·5317831	1·5357437	790
795	3·698	0·5679756	1·3167729	3·392	0·5304768	1·5362351	795
800	3·687	0·5666726	1·3171940	3·382	0·5291791	1·5367264	800
805	3·676	0·5653781	1·3176152	3·372	0·5278899	1·5372177	805
810	3·665	0·5640919	1·3180363	3·362	0·5266089	1·5377090	810
815	3·654	0·5628140	1·3184574	3·352	0·5253364	1·5382003	815
820	3·644	0·5615442	1·3188785	3·342	0·5240719	1·5386916	820
825	3·633	0·5602826	1·3192997	3·333	0·5228154	1·5391829	825
830	3·623	0·5590290	1·3197208	3·323	0·5215671	1·5396742	830
835	3·612	0·5577833	1·3201419	3·314	0·5203267	1·5401656	835
840	3·602	0·5565453	1·3205630	3·304	0·5190939	1·5406569	840
845	3·592	0·5553150	1·3209842	3·295	0·5178689	1·5411482	845
850	3·582	0·5540923	1·3214053	3·286	0·5166514	1·5416395	850
855	3·572	0·5528771	1·3218264	3·277	0·5154414	1·5421308	855
860	3·562	0·5516693	1·3222475	3·268	0·5142389	1·5426221	860
865	3·552	0·5504687	1·3226687	3·259	0·5130436	1·5431134	865
870	3·542	0·5492755	1·3230898	3·250	0·5118556	1·5436047	870
875	3·533	0·5480895	1·3235109	3·241	0·5106749	1·5440961	875
880	3·523	0·5469105	1·3239320	3·232	0·5095012	1·5445874	880
885	3·513	0·5457386	1·3243532	3·224	0·5083345	1·5450787	885
890	3·504	0·5445735	1·3247743	3·215	0·5071746	1·5455700	890
895	3·495	0·5434153	1·3251954	3·206	0·5060217	1·5460613	895
900	3·486	0·5422639	1·3256165	3·198	0·5048756	1·5465526	900
905	3·476	0·5411192	1·3260377	3·190	0·5037361	1·5470439	905
910	3·467	0·5399811	1·3264588	3·181	0·5026032	1·5475352	910
915	3·458	0·5388495	1·3268799	3·173	0·5014768	1·5480266	915
920	3·449	0·5377244	1·3273010	3·165	0·5003569	1·5485179	920
925	3·440	0·5366057	1·3277222	3·157	0·4992435	1·5490092	925
930	3·432	0·5354933	1·3281433	3·149	0·4981364	1·5495005	930
935	3·423	0·5343873	1·3285644	3·141	0·4970355	1·5499918	935
940	3·414	0·5332874	1·3289855	3·133	0·4959409	1·5504831	940
945	3·406	0·5321936	1·3294067	3·125	0·4948524	1·5509744	945
950	3·397	0·5311059	1·3298278	3·117	0·4937700	1·5514657	950

Sine of Inclination (1 over)	n = 050			Sine of Inclination (1 over)	n = ·009		
	N	log N	D		N	log N	D
705	3 008	0 4782687	2 1819878	955	7 947	0 9002265	39907467
710	2 998	0 4768105	2 1826896	960	7 927	0 8991174	39920101
715	2 988	0 4753630	2 1833915	965	7 907	0 8980142	39932735
720	2 978	0 4739261	2 1840934	970	7 887	0 8969168	39945368
725	2 968	0 4724995	2 1847953	975	7 867	0 8958252	39958002
730	2 959	0 4710833	2 1854971	980	7 848	0 8947393	39970636
735	2 949	0 4696774	2 1861990	985	7 828	0 8936591	39983270
740	2 940	0 4682815	2 1869009	990	7 809	0 8925844	39995903
745	2 930	0 4668955	2 1876028	995	7 790	0 8915153	40008537
750	2 921	0 4655192	2 1883046	1000	7 771	0 8904516	40021171
755	2 912	0 4641525	2 1890065	1005	7 752	0 8893930	40033805
760	2 903	0 4627954	2 1897084	1010	7 733	0 8883405	40046438
765	2 894	0 4614476	2 1904103	1015	7 714	0 8872930	40059072
770	2 885	0 4601091	2 1911121	1020	7 696	0 8862507	40071706
775	2 876	0 4587798	2 1918140	1025	7 677	0 8852136	40084340
780	2 867	0 4574595	2 1925159	1030	7 659	0 8841817	40096973
785	2 859	0 4561481	2 1932178	1035	7 641	0 8831550	40109607
790	2 850	0 4548455	2 1939196	1040	7 623	0 8821334	40122241
795	2 842	0 4535516	2 1946215	1045	7 605	0 8811167	40134875
800	2 833	0 4522663	2 1953234	1050	7 588	0 8801049	40147508
805	2 825	0 4509894	2 1960253	1055	7 570	0 8790981	40160142
810	2 817	0 4497208	2 1967271	1060	7 553	0 8780962	40172776
815	2 808	0 4484606	2 1974290	1065	7 535	0 8770992	40185410
820	2 800	0 4472084	2 1981309	1070	7 518	0 8761069	40198043
825	2 792	0 4459643	2 1988328	1075	7 501	0 8751194	40210677
830	2 784	0 4447283	2 1995346	1080	7 484	0 8741364	40223311
835	2 777	0 4435002	2 2002365	1085	7 467	0 8731583	40235945
840	2 769	0 4422798	2 2009384	1090	7 450	0 8721848	40248578
845	2 761	0 4410671	2 2016403	1095	7 434	0 8712158	40261212
850	2 753	0 4398620	2 2023421	1100	7 417	0 8702512	40273846
855	2 746	0 4386643	2 2030440	1105	7 401	0 8692912	40286480
860	2 738	0 4374740	2 2037459	1110	7 385	0 8683356	40299113
865	2 731	0 4362911	2 2044478	1115	7 369	0 8673844	40311747
870	2 723	0 4351154	2 2051496	1120	7 353	0 8664376	40324381
875	2 716	0 4339469	2 2058515	1125	7 337	0 8654951	40337015
880	2 709	0 4327855	2 2065534	1130	7 321	0 8645569	40349648
885	2 702	0 4316311	2 2072553	1135	7 305	0 8636229	40362282
890	2 695	0 4304835	2 2079571	1140	7 289	0 8626933	40374916
895	2 688	0 4293428	2 2086590	1145	7 274	0 8617678	40387550
900	2 681	0 4282090	2 2093609	1150	7 258	0 8608463	40400183
905	2 674	0 4270818	2 2100628	1155	7 243	0 8599290	40412817
910	2 667	0 4259611	2 2107646	1160	7 228	0 8590157	40425451
915	2 660	0 4248470	2 2114665	1165	7 213	0 8581065	40438085
920	2 653	0 4237394	2 2121684	1170	7 198	0 8572013	40450718
925	2 646	0 4226382	2 2128703	1175	7 183	0 8563001	40463352
930	2 640	0 4215433	2 2135721	1180	7 168	0 8554029	40475986
935	2 633	0 4204547	2 2142740	1185	7 153	0 8545095	40488620
940	2 626	0 4193723	2 2149759	1190	7 139	0 8536199	40501253
945	2 620	0 4182960	2 2156778	1195	7 124	0 8527342	40513887
950	2 614	0 4172258	2 2163796	1200	7 110	0 8518522	40526521

Sine of Inclination (1 over)	n = ·010			n = ·011			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
955	7·296	0·8630950	·44341630	6·763	0·8301603	·48775793	955
960	7·278	0·8619880	·44355668	6·746	0·8290554	·48791234	960
965	7·259	0·8608870	·44369705	6·729	0·8279565	·48806676	965
970	7·241	0·8597919	·44383743	6·712	0·8268635	·48822117	970
975	7·223	0·8587025	·44397780	6·695	0·8257762	·48837558	975
980	7·205	0·8576188	·44411818	7·679	0·8246947	·48852999	980
985	7·187	0·8565408	·44425855	6·662	0·8236188	·48868441	985
990	7·169	0·8554683	·44439893	6·646	0·8225484	·48883882	990
995	7·152	0·8544014	·44453930	6·630	0·8214837	·48899323	995
1000	7·134	0·8533399	·44467968	6·613	0·8204243	·48914764	1000
1005	7·117	0·8522839	·44482005	6·597	0·8193705	·48930206	1005
1010	7·100	0·8512333	·44496043	6·581	0·8183219	·48945647	1010
1015	7·083	0·8501880	·44510080	6·566	0·8172788	·48961088	1015
1020	7·066	0·8491479	·44524118	6·550	0·8162408	·48976529	1020
1025	7·049	0·8481130	·44538155	6·534	0·8152080	·48991970	1025
1030	7·032	0·8470834	·44552193	6·519	0·8141805	·49007412	1030
1035	7·016	0·8460589	·44566230	6·504	0·8131582	·49022853	1035
1040	6·999	0·8450395	·44580268	6·488	0·8121409	·49038294	1040
1045	6·983	0·8440250	·44594305	6·473	0·8111285	·49053736	1045
1050	6·967	0·8430154	·44608343	6·458	0·8101211	·49069177	1050
1055	6·950	0·8420108	·44622380	6·443	0·8091186	·49084618	1055
1060	6·934	0·8410111	·44636418	6·429	0·8081210	·49100059	1060
1065	6·919	0·8400163	·44650455	6·414	0·8071284	·49115501	1065
1070	6·903	0·8390262	·44664493	6·399	0·8061404	·49130942	1070
1075	6·887	0·8380409	·44678530	6·385	0·8051572	·49146383	1075
1080	6·872	0·8370602	·44692568	6·371	0·8041786	·49161824	1080
1085	6·856	0·8360842	·44706605	6·356	0·8032048	·49177266	1085
1090	6·841	0·8351129	·44720643	6·342	0·8022356	·49192707	1090
1095	6·826	0·8341461	·44734680	6·328	0·8012709	·49208148	1095
1100	6·811	0·8331838	·44748718	6·314	0·8003107	·49223589	1100
1105	6·796	0·8322260	·44762755	6·300	0·7993550	·49239031	1105
1110	6·781	0·8312726	·44776793	6·286	0·7984037	·49254472	1110
1115	6·766	0·8303236	·44790830	6·273	0·7974569	·49269913	1115
1120	6·751	0·8293790	·44804868	6·259	0·7965144	·49285354	1120
1125	6·737	0·8284387	·44818905	6·246	0·7955762	·49300796	1125
1130	6·722	0·8275027	·44832943	6·232	0·7946422	·49316237	1130
1135	6·708	0·8265710	·44846980	6·219	0·7937128	·49331678	1135
1140	6·693	0·8256435	·44861018	6·206	0·7927874	·49347119	1140
1145	6·679	0·8247202	·44875055	6·193	0·7918661	·49362561	1145
1150	6·665	0·8238010	·44889093	6·179	0·7909491	·49378002	1150
1155	6·651	0·8228859	·44903130	6·166	0·7900360	·49393443	1155
1160	6·637	0·8219748	·44917168	6·154	0·7891271	·49408884	1160
1165	6·623	0·8210678	·44931205	6·141	0·7882223	·49424326	1165
1170	6·609	0·8201648	·44945243	6·128	0·7873214	·49439767	1170
1175	6·596	0·8192658	·44959280	6·115	0·7864244	·49455208	1175
1180	6·582	0·8183707	·44973318	6·103	0·7855315	·49470649	1180
1185	6·569	0·8174796	·44987355	6·090	0·7846425	·49486091	1185
1190	6·555	0·8165922	·45001393	6·078	0·7837573	·49501532	1190
1195	6·542	0·8157087	·45015430	6·066	0·7828759	·49516973	1195
1200	6·529	0·8148289	·45029468	6·053	0·7819982	·49532414	1200

Sine of Inclination (1 over)	n = 012			n = 013			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
955	6 319	0 8006679	53209956	5 944	0 7740467	57644119	955
960	6 303	0 7995652	53226801	5 929	0 7729459	57662368	960
965	6 287	0 7984685	53243646	5 914	0 7718511	57680617	965
970	6 272	0 7973775	53260491	5 899	0 7707620	57698865	970
975	6 256	0 7962923	53277336	5 884	0 7696788	57717114	975
980	6 240	0 7952127	53294181	5 870	0 7686013	57735363	980
985	6 225	0 7941388	53311026	5 855	0 7675294	57753612	985
990	6 210	0 7930706	53327871	5 841	0 7664631	57771860	990
995	6 195	0 7920079	53344716	5 826	0 7654023	57790109	995
1000	6 179	0 7909506	53361561	5 812	0 7643470	57808358	1000
1005	6 164	0 7898988	53378406	5 798	0 7632972	57826607	1005
1010	6 150	0 7888523	53395251	5 784	0 7622526	57844855	1010
1015	6 135	0 7878112	53412096	5 771	0 7612135	57863104	1015
1020	6 120	0 7867752	53428941	5 757	0 7601796	57881353	1020
1025	6 106	0 7857445	53445786	5 743	0 7591508	57899602	1025
1030	6 091	0 7847190	53462631	5 730	0 7581273	57917850	1030
1035	6 077	0 7836987	53479476	5 716	0 7571090	57936099	1035
1040	6 063	0 7826835	53496321	5 703	0 7560957	57954348	1040
1045	6 049	0 7816732	53513166	5 690	0 7550873	57972597	1045
1050	6 035	0 7806677	53530011	5 677	0 7540836	57990845	1050
1055	6 021	0 7796672	53546856	5 664	0 7530854	58009094	1055
1060	6 007	0 7786717	53563701	5 651	0 7520918	58027343	1060
1065	5 994	0 7776810	53580546	5 638	0 7511032	58045592	1065
1070	5 980	0 7766950	53597391	5 625	0 7501192	58063840	1070
1075	5 966	0 7757140	53614236	5 612	0 7491401	58082089	1075
1080	5 953	0 7747375	53631081	5 600	0 7481655	58100338	1080
1085	5 940	0 7737656	53647926	5 587	0 7471956	58118587	1085
1090	5 927	0 7727985	53664771	5 575	0 7462304	58136835	1090
1095	5 913	0 7718359	53681616	5 562	0 7452697	58155084	1095
1100	5 900	0 7708777	53698461	5 550	0 7443136	58173333	1100
1105	5 887	0 7699241	53715306	5 538	0 7433619	58191582	1105
1110	5 875	0 7689749	53732151	5 526	0 7424146	58209830	1110
1115	5 862	0 7680301	53748996	5 514	0 7414718	58228079	1115
1120	5 849	0 7670897	53765841	5 502	0 7405333	58246328	1120
1125	5 837	0 7661535	53782686	5 490	0 7395991	58264577	1125
1130	5 824	0 7652216	53799531	5 479	0 7386693	58282825	1130
1135	5 812	0 7642941	53816376	5 467	0 7377437	58301074	1135
1140	5 799	0 7633708	53833221	5 455	0 7368224	58319323	1140
1145	5 787	0 7624516	53850066	5 444	0 7359051	58337572	1145
1150	5 775	0 7615365	53866911	5 432	0 7349920	58355820	1150
1155	5 763	0 7606256	53883756	5 421	0 7340830	58374069	1155
1160	5 751	0 7597188	53900601	5 410	0 7331781	58392318	1160
1165	5 739	0 7588159	53917446	5 399	0 7322772	58410567	1165
1170	5 727	0 7579171	53934291	5 387	0 7313803	58428815	1170
1175	5 715	0 7570222	53951136	5 376	0 7304874	58447064	1175
1180	5 703	0 7561313	53967981	5 365	0 7295985	58465313	1180
1185	5 692	0 7552442	53984826	5 354	0 7287135	58483562	1185
1190	5 680	0 7543611	54001671	5 344	0 7278322	58501810	1190
1195	5 669	0 7534817	54018516	5 333	0 7269547	58520059	1195
1200	5 657	0 7526061	54035361	5 322	0 7260811	58538308	1200

Sine of Inclination (1 over)	n = ·014			n = ·015			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
955	5·622	0·7498530	·62078282	5·342	0·7277365	·66512445	955
960	5·607	0·7487541	·62097935	5·329	0·7266394	·66533501	960
965	5·593	0·7476612	·62117587	5·316	0·7255483	·66554558	965
970	5·579	0·7465741	·62137240	5·302	0·7244631	·66575614	970
975	5·565	0·7454928	·62156892	5·289	0·7233836	·66596670	975
980	5·552	0·7444172	·62176545	5·276	0·7223098	·66617726	980
985	5·538	0·7433472	·62196197	5·263	0·7212416	·66638783	985
990	5·524	0·7422827	·62215850	5·250	0·7201790	·66659839	990
995	5·511	0·7412239	·62235502	5·237	0·7191220	·66680895	995
1000	5·498	0·7401705	·62255155	5·225	0·7180704	·66701951	1000
1005	5·484	0·7391225	·62274807	5·212	0·7170243	·66723008	1005
1010	5·471	0·7380798	·62294460	5·200	0·7159845	·66744064	1010
1015	5·458	0·7370426	·62314112	5·187	0·7149481	·66765120	1015
1020	5·445	0·7360106	·62333765	5·175	0·7139179	·66786176	1020
1025	5·432	0·7349837	·62353417	5·163	0·7128929	·66807233	1025
1030	5·420	0·7339621	·62373070	5·151	0·7118730	·66828289	1030
1035	5·407	0·7329456	·62392722	5·139	0·7108584	·66849345	1035
1040	5·394	0·7319343	·62412375	5·127	0·7098488	·66870401	1040
1045	5·382	0·7309278	·62432027	5·115	0·7088442	·66891458	1045
1050	5·369	0·7299263	·62451680	5·103	0·7078445	·66912514	1050
1055	5·357	0·7289297	·62471332	5·092	0·7068497	·66933570	1055
1060	5·345	0·7279381	·62490985	5·080	0·7058599	·66954626	1060
1065	5·333	0·7269513	·62510637	5·068	0·7048750	·66975683	1065
1070	5·321	0·7259693	·62530290	5·057	0·7038947	·66996739	1070
1075	5·309	0·7249920	·62549942	5·046	0·7029193	·67017795	1075
1080	5·297	0·7240193	·62569595	5·034	0·7019484	·67038851	1080
1085	5·285	0·7230513	·62589247	5·023	0·7009823	·67059908	1085
1090	5·273	0·7220880	·62608900	5·012	0·7000208	·67080964	1090
1095	5·262	0·7211292	·62628552	5·001	0·6990639	·67102020	1095
1100	5·250	0·7201749	·62648205	4·990	0·6981114	·67123076	1100
1105	5·239	0·7192251	·62667857	4·979	0·6971634	·67144133	1105
1110	5·227	0·7182797	·62687510	4·968	0·6962199	·67165189	1110
1115	5·216	0·7173388	·62707162	4·958	0·6952808	·67186245	1115
1120	5·205	0·7164023	·62726815	4·947	0·6943460	·67207301	1120
1125	5·194	0·7154700	·62746467	4·936	0·6934155	·67228358	1125
1130	5·183	0·7145420	·62766120	4·926	0·6924694	·67249414	1130
1135	5·172	0·7136183	·62785772	4·915	0·6915675	·67270470	1135
1140	5·161	0·7126988	·62805425	4·905	0·6906499	·67291526	1140
1145	5·150	0·7117835	·62825077	4·895	0·6897364	·67312583	1145
1150	5·139	0·7108723	·62844730	4·885	0·6888270	·67333639	1150
1155	5·128	0·7099652	·62864382	4·874	0·6879217	·67354695	1155
1160	5·118	0·7090622	·62884035	4·864	0·6870205	·67375751	1160
1165	5·107	0·7081632	·62903687	4·853	0·6861233	·67396808	1165
1170	5·096	0·7072681	·62923340	4·844	0·6852301	·67417864	1170
1175	5·086	0·7063771	·62942992	4·834	0·6843409	·67438920	1175
1180	5·076	0·7054900	·62962645	4·825	0·6834557	·67459976	1180
1185	5·065	0·7046069	·62982297	4·815	0·6825744	·67481033	1185
1190	5·055	0·7037276	·63001950	4·805	0·6816969	·67502089	1190
1195	5·045	0·7028520	·63021602	4·795	0·6808231	·67523145	1195
1200	5·035	0·7019803	·63041255	4·786	0·6799532	·67544201	1200

Sine of Inclination (1 over)	n = 017			n = ·020			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
955	4 882	0 6886592	75380771	4 366	0 6400356	88683260	955
960	4 870	0 6875657	75404635	4 355	0 6389468	88711335	960
965	4 858	0 6864780	75428499	4 344	0 6378639	88739410	965
970	4 846	0 6853962	75452362	4 333	0 6367869	88767485	970
975	4 834	0 6843202	75476226	4 322	0 6357157	88795560	975
980	4 822	0 6832499	75500090	4 312	0 6346502	88823635	980
985	4 810	0 6821852	75523954	4 301	0 6335902	88851710	985
990	4 788	0 6811260	75547817	4 291	0 6325359	88879785	990
995	4 787	0 6800725	75571681	4 280	0 6314871	88907860	995
1000	4 776	0 6790244	75595545	4 270	0 6304437	88935935	1000
1005	4 764	0 6779818	75619409	4 260	0 6294059	88964010	1005
1010	4 753	0 6769445	75643272	4 250	0 6283734	88992085	1010
1015	4 741	0 6759125	75667136	4 240	0 6273462	89020160	1015
1020	4 730	0 6748858	75691000	4 230	0 6263242	89048235	1020
1025	4 719	0 6738642	75714864	4 220	0 6253074	89076310	1025
1030	4 708	0 6728478	75738727	4 210	0 6242959	89104385	1030
1035	4 697	0 6718367	75762591	4 200	0 6232895	89132460	1035
1040	4 686	0 6708306	75786455	4 191	0 6222882	89160535	1040
1045	4 676	0 6698294	75810319	4 181	0 6212918	89188610	1045
1050	4 665	0 6688332	75834182	4 172	0 6203003	89216685	1050
1055	4 654	0 6678419	75858046	4 162	0 6193138	89244760	1055
1060	4 644	0 6668556	75881910	4 153	0 6183322	89272835	1060
1065	4 633	0 6658741	75905774	4 143	0 6173555	89300910	1065
1070	4 623	0 6648973	75929637	4 134	0 6163835	89328985	1070
1075	4 612	0 6639253	75953501	4 125	0 6154163	89357060	1075
1080	4 602	0 6629579	75977365	4 116	0 6144537	89385135	1080
1085	4 592	0 6619952	76001229	4 107	0 6134957	89413210	1085
1090	4 582	0 6610372	76025092	4 098	0 6125425	89441285	1090
1095	4 572	0 6600837	76048956	4 089	0 6115937	89469360	1095
1100	4 562	0 6591347	76072820	4 080	0 6106495	89497435	1100
1105	4 552	0 6581902	76096684	4 071	0 6097098	89525510	1105
1110	4 542	0 6572501	76120547	4 062	0 6087744	89553585	1110
1115	4 532	0 6563145	76144411	4 054	0 6078435	89581660	1115
1120	4 523	0 6553832	76168275	4 045	0 6069169	89609735	1120
1125	4 513	0 6544562	76192139	4 036	0 6059947	89637810	1125
1130	4 503	0 6535334	76216002	4 028	0 6050768	89665885	1130
1135	4 494	0 6526150	76239866	4 019	0 6041631	89693960	1135
1140	4 484	0 6517009	76263730	4 011	0 6032537	89722035	1140
1145	4 475	0 6507908	76287594	4 003	0 6023484	89750110	1145
1150	4 466	0 6498849	76311457	3 994	0 6014472	89778185	1150
1155	4 456	0 6489830	76335321	3 986	0 6005501	89806260	1155
1160	4 447	0 6480853	76359185	3 978	0 5996571	89834335	1160
1165	4 438	0 6471915	76383049	3 970	0 5987681	89862410	1165
1170	4 429	0 6463018	76406912	3 962	0 5978831	89890485	1170
1175	4 420	0 6454161	76430776	3 954	0 5970021	89918560	1175
1180	4 411	0 6445343	76454640	3 946	0 5961251	89946635	1180
1185	4 402	0 6436564	76478504	3 938	0 5952519	89974710	1185
1190	4 393	0 6427823	76502367	3 930	0 5943826	90002785	1190
1195	4 384	0 6419121	76526231	3 922	0 5935170	90030860	1195
1200	4 376	0 6410456	76550095	3 914	0 5926553	90058935	1200

Sine of Inclination (1 over)	n = ·0225			n = ·0250			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
955	4·010	0·6063693	·99768668	3·779	0·5774211	1·1085408	955
960	4·030	0·6052812	·99800252	3·770	0·5763393	1·1088917	960
965	4·020	0·6042019	·99831836	3·761	0·5752635	1·1092426	965
970	4·010	0·6031315	·99863421	3·751	0·5741935	1·1095936	970
975	4·000	0·6020699	·99895005	3·742	0·5731293	1·1099445	975
980	3·990	0·6010021	·99926590	3·733	0·5720708	1·1102954	980
985	3·981	0·5999458	·99958174	3·724	0·5710178	1·1106464	985
990	3·971	0·5988951	·99989758	3·715	0·5699705	1·1109973	990
995	3·961	0·5978500	1·0002134	3·706	0·5689287	1·1113483	995
1000	3·952	0·5968102	1·0005293	3·697	0·5678923	1·1116992	1000
1005	3·913	0·5957760	1·0008451	3·689	0·5668610	1·1120501	1005
1010	3·933	0·5917471	1·0011610	3·680	0·5658359	1·1124011	1010
1015	3·924	0·5937236	1·0014768	3·671	0·5648157	1·1127520	1015
1020	3·915	0·5927052	1·0017926	3·663	0·5638008	1·1131029	1020
1025	3·906	0·5916921	1·0021085	3·654	0·5627910	1·1134539	1025
1030	3·897	0·5906841	1·0024243	3·646	0·5617864	1·1138048	1030
1035	3·888	0·5896814	1·0027402	3·637	0·5607870	1·1141558	1035
1040	3·879	0·5886838	1·0030560	3·629	0·5597927	1·1145067	1040
1045	3·870	0·5876910	1·0033719	3·621	0·5588033	1·1148576	1045
1050	3·861	0·5867031	1·0036877	3·613	0·5578188	1·1152086	1050
1055	3·852	0·5857202	1·0040036	3·604	0·5568393	1·1155595	1055
1060	3·844	0·5847422	1·0043194	3·596	0·5558646	1·1159104	1060
1065	3·835	0·5837691	1·0046352	3·588	0·5548948	1·1162614	1065
1070	3·826	0·5828007	1·0049511	3·580	0·5539298	1·1166123	1070
1075	3·818	0·5818372	1·0052669	3·572	0·5529696	1·1169633	1075
1080	3·810	0·5808782	1·0055828	3·565	0·5520139	1·1173142	1080
1085	3·801	0·5799237	1·0058986	3·557	0·5510630	1·1176651	1085
1090	3·793	0·5789743	1·0062145	3·549	0·5501167	1·1180161	1090
1095	3·785	0·5780291	1·0065303	3·541	0·5491749	1·1183670	1095
1100	3·776	0·5770885	1·0068461	3·534	0·5482376	1·1187179	1100
1105	3·768	0·5761524	1·0071620	3·526	0·5473048	1·1190689	1105
1110	3·760	0·5752206	1·0074778	3·519	0·5463764	1·1194198	1110
1115	3·752	0·5742934	1·0077937	3·511	0·5454525	1·1197708	1115
1120	3·744	0·5733705	1·0081095	3·504	0·5445329	1·1201217	1120
1125	3·736	0·5724518	1·0084254	3·496	0·5436176	1·1204726	1125
1130	3·729	0·5715374	1·0087412	3·489	0·5427066	1·1208236	1130
1135	3·721	0·5706273	1·0090571	3·482	0·5417999	1·1211745	1135
1140	3·713	0·5697216	1·0093729	3·475	0·5408974	1·1215254	1140
1145	3·705	0·5688199	1·0096887	3·467	0·5399991	1·1218764	1145
1150	3·698	0·5679223	1·0100046	3 460	0·5391049	1·1222273	1150
1155	3·690	0·5670289	1·0103204	3·453	0·5382147	1·1225783	1155
1160	3·682	0·5661395	1·0106363	3·446	0·5373287	1·1229292	1160
1165	3·675	0·5652541	1·0109521	3·439	0·5364466	1·1232801	1165
1170	3·668	0·5643727	1·0112680	3·432	0·5355685	1·1236311	1170
1175	3·660	0·5634953	1·0115838	3·425	0·5346945	1·1239820	1175
1180	3·653	0·5626219	1·0118996	3·418	0·5338244	1·1243329	1180
1185	3·645	0·5617524	1·0122155	3·412	0·5329582	1·1246839	1185
1190	3·638	0·5608866	1·0125313	3·405	0·5320958	1·1250348	1190
1195	3·631	0·5600246	1·0128472	3·398	0·5312372	1·1253858	1195
1200	3·624	0·5591665	1·0131630	3·391	0·5303824	1·1257367	1200

Sine of Inclination (1 over)	n = ·0275			n = ·030			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
955	3·566	0·5522113	1·2193948	3·369	0·5300243	1·3302489	955
960	3·557	0·5511327	1·2197809	3·380	0·5289485	1·3306700	960
965	3·549	0·5500600	1·2201669	3·372	0·5278787	1·3310912	965
970	3·540	0·5489931	1·2205529	3·364	0·5268147	1·3315123	970
975	3·531	0·5479320	1·2209390	3·355	0·5257565	1·3319334	975
980	3·523	0·5468766	1·2213250	3·347	0·5247040	1·3323545	980
985	3·514	0·5458267	1·2217110	3·339	0·5236570	1·3327757	985
990	3·506	0·5447825	1·2220970	3·331	0·5226157	1·3331968	990
995	3·497	0·5437439	1·2224831	3·323	0·5215800	1·3336179	995
1000	3·489	0·5427106	1·2228691	3·316	0·5205496	1·3340390	1000
1005	3·481	0·5416829	1·2232551	3·308	0·5195248	1·3344602	1005
1010	3·473	0·5406604	1·2236412	3·300	0·5185052	1·3348813	1010
1015	3·465	0·5396434	1·2240272	3·292	0·5174910	1·3353024	1015
1020	3·456	0·5386315	1·2244132	3·285	0·5164820	1·3357235	1020
1025	3·448	0·5376248	1·2247993	3·277	0·5154782	1·3361447	1025
1030	3·441	0·5366233	1·2251853	3·269	0·5144797	1·3365658	1030
1035	3·433	0·5356270	1·2255713	3·262	0·5134863	1·3369869	1035
1040	3·425	0·5346358	1·2259574	3·255	0·5124979	1·3374080	1040
1045	3·417	0·5336495	1·2263434	3·247	0·5115144	1·3378292	1045
1050	3·409	0·5326681	1·2267294	3·240	0·5105360	1·3382503	1050
1055	3·402	0·5316917	1·2271155	3·233	0·5095625	1·3386714	1055
1060	3·394	0·5307202	1·2275015	3·225	0·5085938	1·3390926	1060
1065	3·387	0·5297535	1·2278875	3·218	0·5076301	1·3395137	1065
1070	3·379	0·5287916	1·2282735	3·211	0·5066710	1·3399348	1070
1075	3·372	0·5278344	1·2286596	3·204	0·5057167	1·3403559	1075
1080	3·364	0·5268819	1·2290456	3·197	0·5047670	1·3407770	1080
1085	3·357	0·5259340	1·2294316	3·190	0·5038221	1·3411982	1085
1090	3·350	0·5249909	1·2298177	3·183	0·5028818	1·3416193	1090
1095	3·342	0·5240522	1·2302037	3·176	0·5019460	1·3420404	1095
1100	3·335	0·5231180	1·2305897	3·170	0·5010147	1·3424615	1100
1105	3·328	0·5221883	1·2309758	3·163	0·5000879	1·3428827	1105
1110	3·321	0·5212630	1·2313618	3·156	0·4991654	1·3433038	1110
1115	3·314	0·5203422	1·2317478	3·150	0·4982473	1·3437249	1115
1120	3·307	0·5194257	1·2321339	3·143	0·4973339	1·3441460	1120
1125	3·300	0·5185135	1·2325199	3·136	0·4964246	1·3445672	1125
1130	3·293	0·5176055	1·2329059	3·130	0·4955195	1·3449883	1130
1135	3·286	0·5167019	1·2332920	3·123	0·4946187	1·3454094	1135
1140	3·279	0·5158026	1·2336780	3·117	0·4937223	1·3458305	1140
1145	3·273	0·5149073	1·2340640	3·110	0·4928299	1·3462517	1145
1150	3·266	0·5140162	1·2344500	3·104	0·4919416	1·3466728	1150
1155	3·259	0·5131291	1·2348361	3·098	0·4910574	1·3470939	1155
1160	3·253	0·5122461	1·2352221	3·092	0·4901773	1·3475150	1160
1165	3·246	0·5113672	1·2356081	3·085	0·4893012	1·3479362	1165
1170	3·240	0·5104922	1·2359942	3·079	0·4884291	1·3483573	1170
1175	3·233	0·5096212	1·2363802	3·073	0·4875610	1·3487784	1175
1180	3·227	0·5087542	1·2367662	3·067	0·4866969	1·3491995	1180
1185	3·220	0·5078911	1·2371523	3·061	0·4858366	1·3496207	1185
1190	3·214	0·5070318	1·2375383	3·055	0·4849802	1·3500418	1190
1195	3·208	0·5061763	1·2379243	3·049	0·4841276	1·3504629	1195
1200	3·201	0·5053246	1·2383104	3·043	0·4832787	1·3508840	1200

Sine of Inclination (1 over)	n = ·035			n = ·050			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
955	3·110	0·4926935	1·5519571	2·607	0·4161616	2·2170815	955
960	3·102	0·4916229	1·5524484	2·601	0·4151032	2·2177834	960
965	3·094	0·4905583	1·5529397	2·594	0·4140509	2·2184853	965
970	3·087	0·4894995	1·5534310	2·588	0·4130043	2·2191871	970
975	3·079	0·4884466	1·5539223	2·582	0·4119635	2·2198890	975
980	3·072	0·4873993	1·5544136	2·576	0·4109284	2·2205909	980
985	3·064	0·4863576	1·5549049	2·570	0·4098989	2·2212928	985
990	3·057	0·4853215	1·5553962	2·564	0·4088750	2·2219946	990
995	3·050	0·4842910	1·5558876	2·558	0·4078567	2·2226965	995
1000	3·043	0·4832658	1·5563789	2·552	0·4068437	2·2233984	1000
1005	3·036	0·4822461	1·5568702	2·546	0·4058363	2·2241003	1005
1010	3·029	0·4812318	1·5573615	2·540	0·4048341	2·2248021	1010
1015	3·022	0·4802228	1·5578528	2·534	0·4038373	2·2255040	1015
1020	3·015	0·4792190	1·5583441	2·528	0·4028457	2·2262059	1020
1025	3·008	0·4782205	1·5588354	2·523	0·4018593	2·2269078	1025
1030	3·001	0·4772271	1·5593267	2·517	0·4008781	2·2276096	1030
1035	2·994	0·4762389	1·5598181	2·511	0·3999021	2·2283115	1035
1040	2·987	0·4752558	1·5603094	2·506	0·3989311	2·2290134	1040
1045	2·980	0·4742776	1·5608007	2·500	0·3979650	2·2297153	1045
1050	2·974	0·4733042	1·5612920	2·495	0·3970039	2·2304171	1050
1055	2·967	0·4723359	1·5617833	2·489	0·3960477	2·2311190	1055
1060	2·961	0·4713725	1·5622746	2·484	0·3950964	2·2318209	1060
1065	2·954	0·4704139	1·5627659	2·478	0·3941500	2·2325228	1065
1070	2·948	0·4694600	1·5632572	2·473	0·3932083	2·2332246	1070
1075	2·941	0·4685110	1·5637486	2·468	0·3922714	2·2339265	1075
1080	2·935	0·4675665	1·5642399	2·462	0·3913390	2·2346284	1080
1085	2·928	0·4666267	1·5647312	2·457	0·3904113	2·2353303	1085
1090	2·922	0·4656916	1·5652225	2·452	0·3894883	2·2360321	1090
1095	2·916	0·4647609	1·5657138	2·447	0·3885698	2·2367340	1095
1100	2·910	0·4638348	1·5662051	2·441	0·3876558	2·2374359	1100
1105	2·903	0·4629132	1·5666964	2·436	0·3867463	2·2381378	1105
1110	2·897	0·4619960	1·5671877	2·431	0·3858412	2·2388396	1110
1115	2·891	0·4610832	1·5676791	2·426	0·3849405	2·2395415	1115
1120	2·885	0·4601748	1·5681704	2·421	0·3840442	2·2402434	1120
1125	2·879	0·4592706	1·5686617	2·416	0·3831521	2·2409453	1125
1130	2·873	0·4583707	1·5691530	2·411	0·3822643	2·2416471	1130
1135	2·867	0·4574751	1·5696443	2·406	0·3813808	2·2423490	1135
1140	2·861	0·4565838	1·5701356	2·402	0·3805016	2·2430509	1140
1145	2·856	0·4556966	1·5706269	2·397	0·3796265	2·2437528	1145
1150	2·850	0·4548135	1·5711182	2·392	0·3787554	2·2444546	1150
1155	2·844	0·4539345	1·5716096	2·387	0·3778885	2·2451565	1155
1160	2·838	0·4530595	1·5721009	2·382	0·3770256	2·2458584	1160
1165	2·833	0·4521886	1·5725922	2·378	0·3761667	2·2465603	1165
1170	2·827	0·4513217	1·5730835	2·373	0·3753118	2·2472621	1170
1175	2·821	0·4504587	1·5735748	2·368	0·3744609	2·2479640	1175
1180	2·816	0·4495997	1·5740661	2·364	0·3736140	2·2486659	1180
1185	2·810	0·4487447	1·5745574	2·359	0·3727710	2·2493678	1185
1190	2·805	0·4478934	1·5750487	2·355	0·3719318	2·2500696	1190
1195	2·799	0·4470459	1·5755401	2·350	0·3710963	2·2507715	1195
1200	2·794	0·4462022	1·5760314	2·346	0·3702646	2·2514734	1200

Sine of Inclination (1 over)	n = 009			n = 010			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1205	7 095	0 8509741	40539155	6 516	0 8139530	45043505	1205
1210	7 081	0 8500996	40551788	6 503	0 8130807	45057643	1210
1215	7 067	0 8492288	40564422	6 490	0 8122122	45071580	1215
1220	7 053	0 8483618	40577056	6 477	0 8113473	45085618	1220
1225	7 039	0 8474984	40589690	6 464	0 8104862	45099655	1225
1230	7 025	0 8466387	40602323	6 451	0 8096286	45113693	1230
1235	7 011	0 8457826	40614957	6 438	0 8087747	45127730	1235
1240	6 997	0 8449300	40627591	6 426	0 8079243	45141768	1240
1245	6 984	0 8440809	40640225	6 413	0 8070775	45155805	1245
1250	6 970	0 8432353	40652858	6 401	0 8062340	45169843	1250
1255	6 957	0 8423931	40665492	6 388	0 8053940	45183880	1255
1260	6 943	0 8415545	40678126	6 376	0 8045575	45197918	1260
1265	6 930	0 8407192	40690760	6 364	0 8037245	45211955	1265
1270	6 917	0 8398873	40703393	6 352	0 8028949	45225993	1270
1275	6 903	0 8390589	40716027	6 340	0 8020686	45240030	1275
1280	6 890	0 8382337	40728661	6 328	0 8012456	45254068	1280
1285	6 877	0 8374119	40741295	6 316	0 8004259	45268105	1285
1290	6 864	0 8365933	40753928	6 304	0 7996096	45282143	1290
1295	6 851	0 8357780	40766562	6 292	0 7987965	45296180	1295
1300	6 839	0 8349659	40779196	6 280	0 7979866	45310218	1300
1305	6 826	0 8341570	40791830	6 269	0 7971799	45324255	1305
1310	6 813	0 8333514	40804463	6 257	0 7963765	45338293	1310
1315	6 801	0 8325489	40817097	6 246	0 7955762	45352330	1315
1320	6 788	0 8317495	40829731	6 234	0 7947790	45366368	1320
1325	6 776	0 8309532	40842365	6 223	0 7939849	45380405	1325
1330	6 763	0 8301600	40854998	6 211	0 7931939	45394443	1330
1335	6 751	0 8293699	40867632	6 200	0 7924060	45408480	1335
1340	6 739	0 8285829	40880266	6 189	0 7916212	45422518	1340
1345	6 727	0 8277989	40892900	6 178	0 7908394	45436555	1345
1350	6 715	0 8270179	40905533	6 167	0 7900605	45450593	1350
1355	6 703	0 8262398	40918167	6 156	0 7892846	45464630	1355
1360	6 691	0 8254648	40930801	6 145	0 7885118	45478668	1360
1365	*6 679*	*0 8246927*	*40943435*	*6 134*	*0 7877419*	*45492705*	*1365*
1370	6 667	0 8239234	40956068	6 123	0 7869748	45506743	1370
1375	6 655	0 8231571	40968702	6 112	0 7862106	45520780	1375
1380	6 643	0 8223936	40981336	6 102	0 7854493	45534818	1380
1385	6 632	0 8216329	40993970	6 091	0 7846908	45548855	1385
1390	6 620	0 8208750	41006603	6 080	0 7839352	45562893	1390
1395	6 609	0 8201200	41019237	6 070	0 7831824	45576930	1395
1400	6 597	0 8193678	41031871	6 059	0 7824324	45590968	1400
1405	6 586	0 8186183	41044505	6 049	0 7816851	45605005	1405
1410	6 575	0 8178716	41057138	6 039	0 7809406	45619043	1410
1415	6 563	0 8171277	41069772	6 028	0 7801989	45633080	1415
1420	6 552	0 8163865	41082406	6 018	0 7794599	45647118	1420
1425	6 541	0 8156479	41095040	6 008	0 7787235	45661155	1425
1430	6 530	0 8149121	41107673	5 998	0 7779897	45675193	1430
1435	6 519	0 8141787	41120307	5 988	0 7772587	45689230	1435
1440	6 508	0 8134482	41132941	5 978	0 7765303	45703268	1440
1445	6 497	0 8127202	41145575	5 968	0 7758045	45717305	1445
1450	6 486	0 8119948	41158208	5 958	0 7750812	45731343	1450

Sine of Inclination (1 over)	n = ·011			n = ·012			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1205	6·041	0·7811243	·49547856	5·646	0·7517343	·54052206	1205
1210	6·029	0·7802542	·49563297	5·635	0·7508662	·54069051	1210
1215	6·017	0·7793879	·49578738	5·623	0·7500018	·54085896	1215
1220	6·005	0·7785252	·49594179	5·612	0·7491411	·54102741	1220
1225	5·993	0·7776661	·49609621	5·601	0·7482840	·54119586	1225
1230	5·982	0·7768106	·49625062	5·590	0·7474306	·54136431	1230
1235	5·970	0·7759588	·49640503	5·579	0·7465808	·54153276	1235
1240	5·958	0·7751105	·49655944	5·568	0·7457346	·54170121	1240
1245	5·947	0·7742658	·49671386	5·558	0·7448919	·54186966	1245
1250	5·935	0·7734244	·49686827	5·547	0·7440526	·54203811	1250
1255	5·924	0·7725866	·49702268	5·536	0·7432168	·54220656	1255
1260	5·912	0·7717523	·49717709	5·526	0·7423845	·54237501	1260
1265	5·901	0·7709213	·49733151	5·515	0·7415556	·54254346	1265
1270	5·890	0·7700937	·49748592	5·505	0·7407301	·54271191	1270
1275	5·879	0·7692696	·49764033	5·494	0·7399080	·54288036	1275
1280	5·867	0·7684487	·49779474	5·484	0·7390892	·54304881	1280
1285	5·856	0·7676311	·49794916	5·474	0·7382736	·54321726	1285
1290	5·845	0·7668169	·49810357	5·463	0·7374614	·54338571	1290
1295	5·835	0·7660059	·49825798	5·453	0·7366524	·54355416	1295
1300	5·824	0·7651981	·49841239	5·443	0·7358467	·54372261	1300
1305	5·813	0·7643936	·49856681	5·433	0·7350442	·54389106	1305
1310	5·802	0·7635923	·49872122	5·423	0·7342448	·54405951	1310
1315	5·792	0·7627941	·49887563	5·413	0·7334487	·54422796	1315
1320	5·781	0·7619990	·49903004	5·403	0·7326556	·54439641	1320
1325	5·770	0·7612070	·49918446	5·393	0·7318657	·54456486	1325
1330	5·760	0·7604183	·49933887	5·384	0·7310789	·54473331	1330
1335	5·750	0·7596325	·49949328	5·374	0·7302951	·54490176	1335
1340	5·739	0·7588496	·49964769	5·364	0·7295144	·54507021	1340
1345	5·729	0·7580700	·49980211	5·355	0·7287368	·54523866	1345
1350	5·719	0·7572932	·49995652	5·345	0·7279620	·54540711	1350
1355	5·708	0·7565195	·50011093	5·336	0·7271903	·54557556	1355
1360	5·698	0·7557486	·50026534	5·326	0·7264215	·54574401	1360
1365	5·688	0·7549809	·50041976	5·317	0·7256558	·54591246	1365
1370	5·678	0·7542160	·50057417	5·308	0·7248928	·54608091	1370
1375	5·668	0·7534540	·50072858	5·298	0·7241328	·54624936	1375
1380	5·658	0·7526947	·50088299	5·289	0·7233756	·54641781	1380
1385	5·649	0·7519382	·50103741	5·280	0·7226213	·54658626	1385
1390	5·639	0·7511847	·50119182	5·271	0·7218699	·54675471	1390
1395	5·629	0·7504340	·50134623	5·262	0·7211212	·54692316	1395
1400	5·619	0·7496862	·50150064	5·253	0·7203752	·54709161	1400
1405	5·610	0·7489409	·50165506	5·244	0·7196320	·54726006	1405
1410	5·600	0·7481985	·50180947	5·235	0·7188916	·54742851	1410
1415	5·591	0·7474590	·50196388	5·226	0·7181541	·54759696	1415
1420	5·581	0·7467221	·50211829	5·217	0·7174192	·54776541	1420
1425	5·572	0·7459878	·50227271	5·208	0·7166869	·54793386	1425
1430	5·562	0·7452562	·50242712	5·199	0·7159573	·54810231	1430
1435	5·553	0·7445272	·50258153	5·191	0·7152304	·54827076	1435
1440	5·544	0·7438008	·50273594	5·182	0·7145062	·54843921	1440
1445	5·534	0·7430771	·50289036	5·174	0·7137845	·54860766	1445
1450	5·525	0·7423560	·50304477	5·165	0·7130654	·54877611	1450

Sine of Inclination (1 over)	n = ·013			n = ·014			Sine of Inclination 1 over)
	N	log N	D	N	log N	D	
1205	5 311	0 7252113	58556557	5 025	0 7011123	63060907	1205
1210	5 301	0 7243452	58574805	5 015	0 7002481	63080560	1210
1215	5 290	0 7234827	58593054	5 005	0 6993876	63100212	1215
1220	5 280	0 7226240	58611803	4 995	0 6985307	63119865	1220
1225	5 269	0 7217689	58629552	4 985	0 6976776	63139517	1225
1230	5 259	0 7209175	58647800	4 975	0 6968280	63159170	1230
1235	5 249	0 7200697	58666049	4 966	0 6959820	63178822	1235
1240	5 239	0 7192254	58684298	4 956	0 6951397	63198475	1240
1245	5 229	0 7183846	58702547	4 947	0 6943008	63218127	1245
1250	5 219	0 7175473	58720795	4 937	0 6934653	63237780	1250
1255	5 209	0 7167134	58739044	4 928	0 6926333	63257432	1255
1260	5 199	0 7158831	58757293	4 918	0 6918048	63277085	1260
1265	5 189	0 7150561	58775542	4 909	0 6909797	63296737	1265
1270	5 179	0 7142325	58793790	4 900	0 6901581	63316390	1270
1275	5 169	0 7134124	58812039	4 890	0 6893398	63336042	1275
1280	5 159	0 7125955	58830288	4 881	0 6885248	63355695	1280
1285	5 150	0 7117819	58848537	4 872	0 6877131	63375347	1285
1290	5 140	0 7109717	58866785	4 863	0 6869047	63395000	1290
1295	5 131	0 7101647	58885034	4 854	0 6860996	63414652	1295
1300	5 121	0 7093609	58903283	4 845	0 6852977	63434305	1300
1305	5 112	0 7085603	58921532	4 836	0 6844990	63453957	1305
1310	5 102	0 7077629	58939780	4 827	0 6837035	63473610	1310
1315	5 093	0 7069687	58958029	4 818	0 6829112	63493262	1315
1320	5 084	0 7061776	58976278	4 810	0 6821220	63512915	1320
1325	5 074	0 7053897	58994527	4 801	0 6813359	63532567	1325
1330	5 065	0 7046048	59012775	4 792	0 6805528	63552220	1330
1335	5 056	0 7038230	59031024	4 784	0 6797729	63571872	1335
1340	5 047	0 7030443	59049273	4 775	0 6789961	63591525	1340
1345	5 038	0 7022685	59067522	4 767	0 6782223	63611177	1345
1350	5 029	0 7014957	59085770	4 758	0 6774513	63630830	1350
1355	5 020	0 7007259	59104019	4 750	0 6766834	63650482	1355
1360	5 011	0 6999591	59122268	4 742	0 6759185	63670135	1360
1365	5 003	0 6991953	59140517	4 733	0 6751566	63689787	1365
1370	4 994	0 6984343	59158765	4 725	0 6743974	63709440	1370
1375	4 985	0 6976763	59177014	4 717	0 6736413	63729092	1375
1380	4 976	0 6969210	59195263	4 709	0 6728880	63748745	1380
1385	4 968	0 6961686	59213512	4 700	0 6721374	63768397	1385
1390	4 959	0 6954191	59231760	4 692	0 6713898	63788050	1390
1395	4 951	0 6946723	59250009	4 684	0 6706449	63807702	1395
1400	4 942	0 6939284	59268258	4 676	0 6699029	63827355	1400
1405	4 934	0 6931872	59286507	4 668	0 6691635	63847007	1405
1410	4 925	0 6924487	59304755	4 660	0 6684269	63866660	1410
1415	4 917	0 6917131	59323004	4 653	0 6676931	63886312	1415
1420	4 909	0 6909802	59341253	4 645	0 6669620	63905965	1420
1425	4 901	0 6902498	59359502	4 637	0 6662336	63925617	1425
1430	4 892	06895222	59377750	4 629	0 6655078	63945270	1430
1435	4 884	06887973	59395999	4 622	0 6647848	63964922	1435
1440	4 876	06880749	59414248	4 614	0 6640643	63984575	1440
1445	4 868	06873551	59432497	4 606	0 6633464	64004227	1445
1450	4 860	06866379	59450745	4 599	0 6626311	64023880	1450

Sine of Inclination (1 over)	n = ·015			n = ·017			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1205	4·776	0·6790871	·67565258	4·367	0·6401829	·76573959	1205
1210	4·767	0·6782246	·67586314	4·358	0·6393239	·76597822	1210
1215	4·757	0·6773659	·67607370	4·350	0·6384686	·76621686	1215
1220	4·748	0·6765109	·67628426	4·341	0·6376170	·76645550	1220
1225	4·739	0·6756596	·67649483	4·333	0·6367691	·76669414	1225
1230	4·729	0·6748117	·67670539	4·324	0·6359248	·76693277	1230
1235	4·720	0·6739676	·67691595	4·316	0·6350841	·76717141	1235
1240	4·711	0·6731270	·67712651	4·308	0·6342470	·76741005	1240
1245	4·702	0·6722900	·67733708	4·299	0·6334134	·76764869	1245
1250	4·693	0·6714563	·67754764	4·291	0·6325832	·76788732	1250
1255	4·684	0·6706262	·67775820	4·283	0·6317565	·76812596	1255
1260	4·675	0·6697995	·67796876	4·275	0·6309333	·76836460	1260
1265	4·666	0·6689762	·67817933	4·267	0·6301134	·76860324	1265
1270	4·658	0·6681564	·67838989	4·259	0·6292970	·76884187	1270
1275	4·649	0·6673399	·67860045	4·251	0·6284839	·76908051	1275
1280	4·640	0·6665267	·67881101	4·243	0·6276742	·76931915	1280
1285	4·631	0·6657169	·67902158	4·235	0·6268677	·76955779	1285
1290	4·623	0·6649103	·67923214	4·227	0·6260646	·76979642	1290
1295	4·614	0·6641070	·67944270	4·220	0·6252648	·77003506	1295
1300	4·606	0·6633069	·67965326	4·212	0·6244681	·77027370	1300
1305	4·597	0·6625100	·67986383	4·204	0·6236747	·77051234	1305
1310	4·589	0·6617163	·68007439	4·196	0·6228844	·77075097	1310
1315	4·581	0·6609258	·68028495	4·189	0·6220973	·77098961	1315
1320	4·572	0·6601384	·68049551	4·181	0·6213134	·77122825	1320
1325	4·564	0·6593541	·68070608	4·174	0·6205325	·77146689	1325
1330	4·556	0·6585729	·68091664	4·166	0·6197547	·77170552	1330
1335	4·548	0·6577948	·68112720	4·159	0·6189800	·77194416	1335
1340	4·540	0·6570198	·68133776	4·152	0·6182084	·77218280	1340
1345	4·532	0·6562478	·68154833	4·144	0·6174398	·77242144	1345
1350	4·524	0·6554787	·68175889	4·137	0·6166742	·77266007	1350
1355	4·516	0·6547126	·68196945	4·130	0·6159115	·77289871	1355
1360	4·508	0·6539495	·68218001	4·122	0·6151518	·77313735	1360
1365	4·500	0·6531893	·68239058	4·115	0·6143951	·77337599	1365
1370	4·492	0·6524320	·68260114	4·108	0·6136412	·77361462	1370
1375	4·484	0·6516777	·68281170	4·101	0·6128903	·77385326	1375
1380	4·476	0·6509261	·68302226	4·094	0·6121422	·77409190	1380
1385	4·469	0·6501774	·68323283	4·087	0·6113968	·77433054	1385
1390	4·461	0·6494316	·68344339	4·080	0·6106544	·77456917	1390
1395	4·453	0·6486885	·68365395	4·073	0·6099148	·77480781	1395
1400	4·446	0·6479483	·68386451	4·066	0·6091780	·77504645	1400
1405	4·438	0·6472107	·68407508	4·059	0·6084439	·77528509	1405
1410	4·431	0·6464760	·68428564	4·052	0·6077125	·77552372	1410
1415	4·423	0·6457440	·68449620	4·046	0·6069840	·77576236	1415
1420	4·416	0·6450146	·68470676	4·039	0·6062581	·77600100	1420
1425	4·408	0·6442880	·68491733	4·032	0·6055349	·77623964	1425
1430	4·401	0·6435640	·68512789	4·025	0·6048143	·77647827	1430
1435	4·394	0·6428428	·68533845	4·019	0·6040965	·77671691	1435
1440	4·387	0·6421241	·68554901	4·012	0·6033812	·77695555	1440
1445	4·379	0·6414080	·68575958	4·006	0·6026685	·77719419	1445
1450	4·372	0·6406945	·68597014	3·999	0·6019585	·77743282	1450

Sine of Inclination (1 over)	n = 020			n = 0225			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1205	3 907	0 5917974	90087010	3 617	0 5583122	1 0134789	1205
1210	3 899	0 5909431	90115085	3 610	0 5574616	1 0137947	1210
1215	3 891	0 5900926	90143160	3 603	0 5566146	1 0141106	1215
1220	3 884	0 5892457	90171235	3 596	0 5557714	1 0144264	1220
1225	3 876	0 5884025	90199310	3 589	0 5549318	1 0147422	1225
1230	3 869	0 5875630	90227385	3 582	0 5540958	1 0150581	1230
1235	3 861	0 5867270	90255460	3 575	0 5532635	1 0153739	1235
1240	3 854	0 5858947	90283535	3 568	0 5524347	1 0156898	1240
1245	3 846	0 5850658	90311610	3 561	0 5516094	1 0160056	1245
1250	3 839	0 5842403	90339685	3 555	0 5507875	1 0163215	1250
1255	3 832	0 5834183	90367760	3 548	0 5499691	1 0166373	1255
1260	3 825	0 5825998	90395835	3 541	0 5491542	1 0169531	1260
1265	3 818	0 5817847	90423910	3 535	0 5483428	1 0172690	1265
1270	3 810	0 5809730	90451985	3 528	0 5475347	1 0175848	1270
1275	3 803	0 5801647	90480060	3 522	0 5467299	1 0179007	1275
1280	3 796	0 5793597	90508135	3 515	0 5459285	1 0182165	1280
1285	3 789	0 5785580	90536210	3 509	0 5451304	1 0185324	1285
1290	3 782	0 5777595	90564285	3 502	0 5443356	1 0188482	1290
1295	3 775	0 5769644	90592360	3 496	0 5435440	1 0191641	1295
1300	3 769	0 5764725	90620435	3 490	0 5427557	1 0194799	1300
1305	3 762	0 5753838	90648510	3 483	0 5419705	1 0197957	1305
1310	3 755	0 5745982	90676585	3 477	0 5411886	1 0201116	1310
1315	3 748	0 5738159	90704660	3 471	0 5404098	1 0204274	1315
1320	3 741	0 5730366	90732735	3 464	0 5396341	1 0207433	1320
1325	3 735	0 5722605	90760810	3 458	0 5388616	1 0210591	1325
1330	3 728	0 5714875	90788885	3 452	0 5380921	1 0213750	1330
1335	3 721	0 5707175	90816960	3 446	0 5373257	1 0216908	1335
1340	3 715	0 5699506	90845035	3 440	0 5365624	1 0220066	1340
1345	3 708	0 5691867	90873110	3 434	0 5358022	1 0223225	1345
1350	3 702	0 5684257	90901185	3 428	0 5350448	1 0226383	1350
1355	3 695	0 5676678	90929260	3 422	0 5342904	1 0229542	1355
1360	3 689	0 5669128	90957335	3 416	0 5335390	1 0232700	1360
1365	3 683	0 5661608	90985410	3 410	0 5327906	1 0235859	1365
1370	3 676	0 5654116	91013485	3 404	0 5320449	1 0239017	1370
1375	3 670	0 5646654	91041560	3 399	0 5313023	1 0242176	1375
1380	3 664	0 5639220	91069635	3 393	0 5305625	1 0245334	1380
1385	3 657	0 5631814	91097710	3 387	0 5298254	1 0248492	1385
1390	3 651	0 5624437	91125785	3 381	0 5290913	1 0251651	1390
1395	3 645	0 5617087	91153860	3 376	0 5283599	1 0254809	1395
1400	3 639	0 5609766	91181935	3 370	0 5276314	1 0257968	1400
1405	3 633	0 5602472	91210010	3 364	0 5269055	1 0261126	1405
1410	3 627	0 5595206	91238085	3 359	0 5261825	1 0264285	1410
1415	3 621	0 5587967	91266160	3 353	0 5254623	1 0267443	1415
1420	3 615	0 5580756	91294235	3 348	0 5247447	1 0270601	1420
1425	3 609	0 5573570	91322310	3 342	0 5240297	1 0273760	1425
1430	3 603	0 5566412	91350385	3 337	0 5233174	1 0276918	1430
1435	3 597	0 5559280	91378460	3 331	0 5226078	1 0280077	1435
1440	3 591	0 5552175	91406535	3 326	0 5219008	1 0283235	1440
1445	3 585	0 5545095	91434610	3 320	0 5211964	1 0286394	1445
1450	3 579	0 5538040	91462685	3 315	0 5204946	1 0289552	1450

Sine of Inclination (1 over)	n = ·0250			n = ·0275			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1205	3·385	0·5295814	1·1260876	3·195	0·5044766	1·2386964	1205
1210	3·378	0·5286811	1·1264386	3·189	0·5036324	1·2390824	1210
1215	3·372	0·5278105	1·1267895	3·183	0·5027918	1·2394685	1215
1220	3·365	0·5270005	1·1271404	3·177	0·5019550	1·2398545	1220
1225	3·359	0·5261643	1·1274914	3·170	0·5011218	1·2402405	1225
1230	3·352	0·5253316	1·1278423	3·164	0·5002923	1·2406265	1230
1235	3·346	0·5245026	1·1281933	3·158	0·4994663	1·2410126	1235
1240	3·339	0·5236772	1·1285442	3·152	0·4986439	1·2413986	1240
1245	3·333	0·5228552	1·1288951	3·146	0·4978250	1·2417846	1245
1250	3·327	0·5220366	1·1292461	3·140	0·4970095	1·2421707	1250
1255	3·321	0·5212215	1·1295970	3·135	0·4961976	1·2425567	1255
1260	3·314	0·5204099	1·1299479	3·129	0·4953891	1·2429427	1260
1265	3·308	0·5196018	1·1302989	3·123	0·4945840	1·2433288	1265
1270	3·302	0·5187970	1·1306498	3·117	0·4937822	1·2437148	1270
1275	3·296	0·5179956	1·1310008	3·112	0·4929839	1·2441008	1275
1280	3·290	0·5171975	1·1313517	3·106	0·4921888	1·2444869	1280
1285	3·284	0·5164026	1·1317026	3·100	0·4913917	1·2448729	1285
1290	3·278	0·5156111	1·1320536	3·095	0·4906087	1·2452589	1290
1295	3·272	0·5148229	1·1324045	3·089	0·4898236	1·2456450	1295
1300	3·266	0·5140379	1·1327554	3·083	0·4890416	1·2460310	1300
1305	3·260	0·5132561	1·1331064	3·078	0·4882628	1·2464170	1305
1310	3·254	0·5124774	1·1334573	3·072	0·4874872	1·2468030	1310
1315	3·249	0·5117020	1·1338083	3·067	0·4867149	1·2471891	1315
1320	3·243	0·5109296	1·1341592	3·062	0·4859456	1·2475751	1320
1325	3·237	0·5101603	1·1345101	3·056	0·4851794	1·2479611	1325
1330	3·231	0·5093942	1·1348611	3·051	0·4844163	1·2483472	1330
1335	3·226	0·5086311	1·1352120	3·045	0·4836562	1·2487332	1335
1340	3·220	0·5078712	1·1355629	3·040	0·4828993	1·2491192	1340
1345	3·215	0·5071142	1·1359139	3·035	0·4821444	1·2495053	1345
1350	3·209	0·5063601	1·1362648	3·030	0·4813944	1·2498913	1350
1355	3·203	·05056090	1·1366158	3·024	0·4806463	1·2502773	1355
1360	3·198	·05048609	1·1369667	3·019	0·4799013	1·2506634	1360
1365	3·192	·05041158	1·1373176	3·014	0·4791592	1·2510494	1365
1370	3·187	·05033735	1·1376686	3·009	0·4784199	1·2514354	1370
1375	3·182	·05026341	1·1380195	3·004	0·4776837	1·2518215	1375
1380	3·176	·05018976	1·1383704	2·999	0·4769503	1·2522075	1380
1385	3·171	·05011639	1·1387214	2·994	0·4762196	1·2525935	1385
1390	3·165	·05004331	1·1390723	2·989	0·4754918	1·2529795	1390
1395	3·160	·04997050	1·1394233	2·984	0·4747668	1·2533656	1395
1400	3·155	·04989797	1·1397742	2·979	0·4740446	1·2537516	1400
1405	3·150	·04982572	1·1401251	2·974	0·4733251	1·2541376	1405
1410	3·144	·04975374	1·1404761	2·969	0·4726083	1·2545237	1410
1415	3·139	·04968204	1·1408270	2·964	0·4718944	1·2549097	1415
1420	3·134	·04961062	1·1411779	2·959	0·4711832	1·2552957	1420
1425	3·129	·04953945	1·1415289	2·954	0·4704746	1·2556818	1425
1430	3·124	0·4946855	1·1418798	2·950	0·4697686	1·2560678	1430
1435	3·119	0·4939792	1·1422308	2·945	0·4690654	1·2564538	1435
1440	3·114	0·4932755	1·1425817	2·940	0·4683647	1·2568399	1440
1445	3·109	0·4925744	1·1429326	2·935	0·4676667	1·2572259	1445
1450	3·104	0·4918759	1·1432836	2·931	0·4669712	1·2576119	1450

Sine of Inclination (1 over)	n = ·030			n = 035			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1205	3 037	0 4824336	1 3513052	2 788	0 4453623	1 5765227	1205
1210	3 031	0 4815922	1 3517263	2 783	0 4445260	1 5770140	1210
1215	3 025	0 4807546	1 3521474	2 778	0 4436935	1 5775053	1215
1220	3 019	0 4799206	1 3525685	2 772	0 4428647	1 5779966	1220
1225	3 014	0 4790903	1 3529897	2 767	0 4420395	1 5784879	1225
1230	3 008	0 4782635	1 3534108	2 762	0 4412180	1 5789792	1230
1235	3 002	0 4774404	1 3538319	2 757	0 4404000	1 5794706	1235
1240	2 997	0 4766209	1 3542530	2 752	0 4395856	1 5799619	1240
1245	2 991	0 4758049	1 3546742	2 746	0 4387747	1 5804532	1245
1250	2 985	0 4749923	1 3550953	2 741	0 4379672	1 5809445	1250
1255	2 980	0 4741831	1 3555164	2 736	0 4371632	1 5814358	1255
1260	2 974	0 4733775	1 3559375	2 731	0 4363637	1 5819271	1260
1265	2 969	0 4725752	1 3563587	2 726	0 4355656	1 5824184	1265
1270	2 963	0 4717764	1 3567798	2 721	0 4347719	1 5829097	1270
1275	2 958	0 4709809	1 3572009	2 716	0 4339815	1 5834011	1275
1280	2 952	0 4701887	1 3576220	2 711	0 4331945	1 5838924	1280
1285	2 947	0 4693998	1 3580432	2 707	0 4324107	1 5843837	1285
1290	2 942	0 4686142	1 3584643	2 702	0 4316302	1 5848750	1290
1295	2 937	0 4678319	1 3588854	2 697	0 4308531	1 5853663	1295
1300	2 931	0 4670528	1 3593065	2 692	0 4300791	1 5858576	1300
1305	2 926	0 4662768	1 3597277	2 687	0 4293083	1 5863489	1305
1310	2 921	0 4655041	1 3601488	2 683	0 4285407	1 5868402	1310
1315	2 916	0 4647346	1 3605699	2 678	0 4277763	1 5873316	1315
1320	2 911	0 4639681	1 3609910	2 673	0 4270149	1 5878229	1320
1325	2 905	0 4632048	1 3614122	2 668	0 4262567	1 5883142	1325
1330	2 900	0 4624445	1 3618333	2 664	0 4255016	1 5888055	1330
1335	2 895	0 4616874	1 3622544	2 659	0 4247495	1 5892968	1335
1340	2 890	0 4609333	1 3626755	2 655	0 4240006	1 5897881	1340
1345	2 885	0 4601822	1 3630967	2 650	0 4232546	1 5902794	1345
1350	2 880	0 4594340	1 3635178	2 646	0 4225116	1 5907707	1350
1355	2 875	0 4586888	1 3639389	2 641	0 4217715	1 5912621	1355
1360	2 870	0 4579466	1 3643600	2 636	0 4210344	1 5917534	1360
1365	2 866	0 4572074	1 3647812	2 632	0 4203003	1 5922447	1365
1370	2 861	0 4564710	1 3652023	2 628	0 4195689	1 5927360	1370
1375	2 856	0 4557376	1 3656234	2 623	0 4188406	1 5932273	1375
1380	2 851	0 4550070	1 3660445	2 619	0 4181151	1 5937186	1380
1385	2 846	0 4542791	1 3664657	2 615	0 4173923	1 5942099	1385
1390	2 842	0 4535542	1 3668868	2 610	0 4166725	1 5947012	1390
1395	2 837	0 4528320	1 3673079	2 606	0 4159655	1 5951926	1395
1400	2 832	0 4521126	1 3677290	2 602	0 4152412	1 5956839	1400
1405	2 827	0 4513960	1 3681502	2 597	0 4145296	1 5961752	1405
1410	2 823	0 4506821	1 3685713	2 593	0 4138208	1 5966665	1410
1415	2 818	0 4499710	1 3689924	2 589	0 4131148	1 5971578	1415
1420	2 814	0 4492626	1 3694135	2 585	0 4124115	1 5976491	1420
1425	2 809	0 4485568	1 3698347	2 581	0 4117108	1 5981404	1425
1430	2 804	0 4478537	1 3702558	2 576	0 4110128	1 5986317	1430
1435	2 800	0 4471532	1 3706769	2 572	0 4103174	1 5991231	1435
1440	2 795	0 4464554	1 3710980	2 568	0 4096247	1 5996144	1440
1445	2 791	0 4457602	1 3715192	2 564	0 4089346	1 6001057	1445
1450	2 787	0 4450675	1 3719403	2 560	0 4082470	1 6005970	1450

Sine of Inclination (1 over)	n = ·050			Sine of Inclination (1 over)	n = ·009		
	N	log. N	D		N	log. N	D
1205	2·311	0·3694368	2·2521753	1455	6·475	0·8112720	·41170842
1210	2·337	0·3686120	2·2528771	1460	6·465	0·8105517	·41183476
1215	2·332	0·3677921	2·2535790	1465	6·454	0·8098340	·41196110
1220	2·328	0·3669752	2·2542809	1470	6·443	0·8091188	·41208743
1225	2·324	0·3661621	2·2549828	1475	6·433	0·8084062	·41221377
1230	2·319	0·3653526	2·2556846	1480	6·422	0·8076959	·41234011
1235	2·315	0·3645466	2·2563865	1485	6·412	0·8069882	·41246645
1240	2·311	0·3637442	2·2570884	1490	6·402	0·8062830	·41259278
1245	2·306	0·3629451	2·2577903	1495	6·391	0·8055802	·41271912
1250	2·302	0·3621499	2·2584921	1500	6·381	0·8048798	·41284546
1255	2·298	0·3613579	2·2591940	1505	6·371	0·8041818	·41297180
1260	2·291	0·3605694	2·2598959	1510	6·360	0·8034863	·41309813
1265	2·290	0·3597842	2·2605978	1515	6·350	0·8027932	·41322447
1270	2·286	0·3590025	2·2612996	1520	6·340	0·8021023	·41335081
1275	2·282	0·3582241	2·2620015	1525	6·330	0·8014139	·41347715
1280	2·277	0·3574491	2·2627034	1530	6·320	0·8007278	·41360348
1285	2·273	0·3566773	2·2634053	1535	6·310	0·8000440	·41372982
1290	2·269	0·3559088	2·2641071	1540	6·300	0·7993624	·41385616
1295	2·265	0·3551436	2·2648090	1545	6·290	0·7986832	·41398250
1300	2·261	0·3543815	2·2655109	1550	6·281	0·7980062	·41410883
1305	2·257	0·3536227	2·2662128	1555	6·271	0·7973316	·41423517
1310	2·251	0·3528670	2·2669146	1560	6·261	0·7966592	·41436151
1315	2·250	0·3521146	2·2676165	1565	6·252	0·7959889	·41448785
1320	2·246	0·3513652	2·2683184	1570	6·242	0·7953219	·41461418
1325	2·242	0·3506189	2·2690203	1575	6·232	0·7946551	·41474052
1330	2·238	0·3498757	2·2697221	1580	6·223	0·7939915	·41486686
1335	2·234	0·3491356	2·2704240	1585	6·214	0·7933301	·41499320
1340	2·230	0·3483986	2·2711259	1590	6·204	0·7926708	·41511953
1345	2·227	0·3476645	2·2718278	1595	6·195	0·7920137	·41524587
1350	2·223	0·3469334	2·2725296	1600	6·185	0·7913586	·41537221
1355	2·219	0·3462052	2·2732315	1605	6·176	0·7907057	·41549855
1360	2·216	0·3454800	2·2739334	1610	6·167	0·7900550	·41562488
1365	2·212	0·3447578	2·2746353	1615	6·158	0·7894063	·41575122
1370	2·208	0·3440384	2·2753371	1620	6·148	0·7887597	·41587756
1375	2·205	0·3433220	2·2760390	1625	6·139	0·7881151	·41600390
1380	2·201	0·3426084	2·2767409	1630	6·130	0·7874727	·41613023
1385	2·197	0·3418976	2·2774428	1635	6·121	0·7868322	·41625657
1390	2·194	0·3411896	2·2781446	1640	6·112	0·7861937	·41638291
1395	2·190	0·3404844	2·2788465	1645	6·103	0·7855573	·41650925
1400	2·187	0·3397821	2·2795484	1650	6·094	0·7849229	·41663558
1405	2·183	0·3390824	2·2802503	1655	6·085	0·7842906	·41676192
1410	2·180	0·3383855	2·2809521	1660	6·077	0·7836602	·41688826
1415	2·176	0·3376913	2·2816540	1665	6·068	0·7830317	·41701460
1420	2·173	0·3369999	2·2823559	1670	6·059	0·7824052	·41714093
1425	2·169	0·3363111	2·2830578	1675	6·050	0·7817807	·41726727
1430	2·166	0·3356249	2·2837596	1680	6·042	0·7811580	·41739361
1435	2·162	0·3349414	2·2844615	1685	6·033	0·7805373	·41751995
1440	2·159	0·3342606	2·2851634	1690	6·024	0·7799186	·41764628
1445	2·156	0·3335823	2·2858653	1695	6·016	0·7793016	·41777262
1450	2·152	0·3329066	2·2865671	1700	6·007	0·7786867	·41789896

Sine of Inclination (1 over)	n = 010			n = 011			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1455	5 948	0 7743606	45745380	5 516	0 7416375	50319918	1455
1460	5 938	0 7736426	45759418	5 507	0 7409216	50335359	1460
1465	5 928	0 7729270	45773455	5 498	0 7402081	50350801	1465
1470	5 919	0 7722140	45787493	5 489	0 7394972	50366242	1470
1475	5 909	0 7715036	45801530	5 480	0 7387889	50381683	1475
1480	5 899	0 7707955	45815568	5 471	0 7380829	50397124	1480
1485	5 890	0 7700901	45829605	5 462	0 7373796	50412566	1485
1490	5 880	0 7693871	45843643	5 454	0 7366786	50428007	1490
1495	5 871	0 7686864	45857680	5 445	0 7359801	50443448	1495
1500	5 861	0 7679882	45871718	5 436	0 7352839	50458889	1500
1505	5 852	0 7672924	45881755	5 427	0 7345903	50474331	1505
1510	5 843	0 7665990	45899793	5 419	0 7338992	50489772	1510
1515	5 833	0 7659081	45913830	5 410	0 7332103	50505213	1515
1520	5 824	0 7652195	45927868	5 402	0 7325237	50520654	1520
1525	5 815	0 7645333	45941905	5 394	0 7318395	50536096	1525
1530	5 806	0 7638493	45955943	5 385	0 7311577	50551537	1530
1535	5 797	0 7631676	45969980	5 376	0 7304781	50566978	1535
1540	5 787	0 7624883	45984018	5 368	0 7298008	50582419	1540
1545	5 778	0 7618112	45998055	5 360	0 7291259	50597861	1545
1550	5 769	0 7611364	46012093	5 351	0 7284533	50613302	1550
1555	5 761	0 7604640	46026130	5 343	0 7277829	50628743	1555
1560	5 752	0 7597937	46040168	5 335	0 7271147	50644184	1560
1565	5 743	0 7591256	46054205	5 327	0 7264488	50659626	1565
1570	5 734	0 7584598	46068243	5 319	0 7257850	50675067	1570
1575	5 725	0 7577962	46082280	5 310	0 7251236	50690508	1575
1580	5 717	0 7571349	46096318	5 302	0 7244643	50705949	1580
1585	5 708	0 7564756	46110355	5 294	0 7238071	50721391	1585
1590	5 699	0 7558185	46124393	5 286	0 7231521	50736832	1590
1595	5 691	0 7551635	46138430	5 278	0 7224992	50752273	1595
1600	5 682	0 7545106	46152468	5 270	0 7218484	50767714	1600
1605	5 674	0 7538599	46166 05	5 263	0 7211998	50783156	1605
1610	5 665	0 7532114	4618054o	5 255	0 7205534	50798597	1610
1615	5 657	0 7525649	46194580	5 247	0 7199090	50814038	1615
1620	5 648	0 751920o	46208618	5 239	0 7192666	50829479	1620
1625	5 640	0 7512781	46222655	5 232	0 7186264	50844921	1625
1630	5 632	0 7506378	46236693	5 224	0 7179882	50860362	1630
1635	5 623	0 7499995	46250730	5 216	0 7113520	50875803	1635
1640	5 615	0 749366o2	46264768	5 209	0 7167179	50891244	1640
1645	5 607	0 7487290	46278805	5 201	0 7160857	50906686	1645
1650	5 599	0 7480968	46292843	5 193	0 7154555	50922127	1650
1655	5 591	0 7474666	46306880	5 186	0 7148274	50937568	1655
1660	5 583	0 7468384	46320918	5 178	0 7142014	50953009	1660
1665	5 575	0 7462121	4633495o	5 171	0 7135772	50968451	1665
1670	5 567	0 7455878	46348993	5 164	0 7129549	50983892	1670
1675	5 559	0 7449654	46363030	5 156	0 7123346	50999333	1675
1680	5 551	0 7443449	46377068	5 149	0 7117162	51014774	1680
1685	5 543	0 7437264	46391105	5 142	0 7110998	51030216	1685
1690	5 535	0 7431098	46405143	5 134	0 7104853	51045667	1690
1695	5 527	0 7424951	46419180	5 127	0 7098727	51061098	1695
1700	5 519	0 7418823	46433218	5 120	0 7092620	51076539	1700

Sine of Inclination (1 over)	n = ·012			n = ·013			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1455	5·156	0·7123488	·54894456	4·852	0·6859234	·59468994	1455
1460	5·148	0·7116349	·54911301	4·844	0·6852114	·59487243	1460
1465	5·140	0·7109234	·54928146	4·836	0·6845020	·59505492	1465
1470	5·131	0·7102145	·54944991	4·828	0·6837950	·59523740	1470
1475	5·123	0·7095081	·54961836	4·820	0·6830907	·59541989	1475
1480	5·115	0·7088043	·54978681	4·813	0·6823887	·59560238	1480
1485	5·106	0·7081030	·54995526	4·805	0·6816893	·59578487	1485
1490	5·098	0·7074041	·55012371	4·797	0·6809923	·59596735	1490
1495	5·090	0·7067076	·55029216	4·790	0·6802977	·59614984	1495
1500	5·082	0·7060135	·55046061	4·782	0·6796056	·59633233	1500
1505	5·074	0·7053219	·55062906	4·774	0·6789159	·59651482	1505
1510	5·066	0·7046327	·55079751	4·767	0·6782286	·59669730	1510
1515	5·058	0·7039459	·55096596	4·759	0·6775437	·59687979	1515
1520	5·050	0·7032613	·55113441	4·752	0·6768611	·59706228	1520
1525	5·042	0·7025792	·55130286	4·744	0·6761809	·59724477	1525
1530	5·034	0·7018993	·55147131	4·737	0·6755030	·59742725	1530
1535	5·026	0·7012218	·55163976	4·730	0·6748275	·59760974	1535
1540	5·018	0·7005466	·55180821	4·722	0·6741542	·59779223	1540
1545	5·010	0·6998736	·55197666	4·715	0·6734831	·59797472	1545
1550	5·003	0·6992029	·55214511	4·708	0·6728144	·59815720	1550
1555	4·995	0·6985346	·55231356	4·701	0·6721480	·59833969	1555
1560	4·987	0·6978684	·55248201	4·693	0·6714838	·59852218	1560
1565	4·980	0·6972045	·55265046	4·686	0·6708218	·59870467	1565
1570	4·972	0·6965427	·55281891	4·679	0·6701620	·59888715	1570
1575	4·965	0·6958833	·55298736	4·672	0·6695045	·59906964	1575
1580	4·957	0·6952260	·55315581	4·665	0·6688492	·59925213	1580
1585	4·950	0·6945708	·55332426	4·658	0·6681959	·59943462	1585
1590	4·942	0·6939179	·55349271	4·651	0·6675449	·59961710	1590
1595	4·935	0·6932671	·55366116	4·644	0·6668959	·59979959	1595
1600	4·927	0·6926183	·55382961	4·637	0·6662491	·59998207	1600
1605	4·920	0·6919717	·55399806	4·630	0·6656745	·60016457	1605
1610	4·913	0·6913272	·55416651	4·623	0·6649619	·60034705	1610
1615	4·906	0·6906848	·55433496	4·617	0·6643215	·60052954	1615
1620	4·898	0·6900445	·55450341	4·610	0·6636831	·60071203	1620
1625	4·891	0·6894062	·55467186	4·603	0·6630467	·60089452	1625
1630	4·884	0·6887700	·55484031	4·596	0·6624125	·60107700	1630
1635	4·877	0·6881358	·55500876	4·590	0·6617802	·60125949	1635
1640	4·870	0·6875036	·55517721	4·583	0·6611500	·60144198	1640
1645	4·863	0·6868736	·55534566	4·576	0·6605218	·60162447	1645
1650	4·856	0·6862455	·55551411	4·570	0·6598957	·60180695	1650
1655	4·849	0·6856194	·55568256	4·563	0·6592715	·60198944	1655
1660	4·842	0·6849953	·55585101	4·557	0·6586494	·60217193	1660
1665	4·835	0·6843731	·55601946	4·550	0·6580291	·60235442	1665
1670	4·828	0·6837529	·55618791	4·544	0·6574108	·60253690	1670
1675	4·821	0·6831346	·55635636	4·537	0·6567944	·60271939	1675
1680	4·814	0·6825182	·55652481	4·531	0·6561800	·60290188	1680
1685	4·807	0·6819038	·55669326	4·524	0·6555675	·60308437	1685
1690	4·801	0·6812912	·55686171	4·518	0·6549570	·60326685	1690
1695	4·794	0·6806806	·55703016	4·512	0·6543483	·60344934	1695
1700	4·787	0·6800719	·55719861	4·505	0·6537415	·60363183	1700

Sine of Inclination (1 over)	n = 014			n = 015			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1455	4 591	0 6619184	64043532	4 365	0 6399836	68618070	1455
1460	4 584	0 6612083	64063185	4 358	0 6392754	68639126	1460
1465	4 576	0 6605008	64082837	4 351	0 6385696	68660183	1465
1470	4 569	0 6597957	64102490	4 344	0 6378663	68681239	1470
1475	4 561	0 6590932	64122142	4 337	0 6371656	68702295	1475
1480	4 556	0 6583931	64141795	4 330	0 6364673	68723351	1480
1485	4 547	0 6576956	64161447	4 323	0 6357716	68744408	1485
1490	4 539	0 6570004	64181100	4 316	0 6350783	68765464	1490
1495	4 532	0 6563077	64200752	4 309	0 6343874	68786520	1495
1500	4 525	0 6556174	64220405	4 302	0 6336989	68807576	1500
1505	4 518	0 6549296	64240057	4 295	0 6330129	68828633	1505
1510	4 511	0 6542442	64259710	4 289	0 6323292	68849689	1510
1515	4 504	0 6535612	64279362	4 282	0 6316480	68870745	1515
1520	4 497	0 6528804	64299015	4 275	0 6309691	68891801	1520
1525	4 490	0 6522021	64318667	4 269	0 6302926	68912858	1525
1530	4 483	0 6515261	64338320	4 262	0 6296184	68933914	1530
1535	4 476	0 6508524	64357972	4 255	0 6289464	68954970	1535
1540	4 469	0 6501809	64377625	4 249	0 6282768	68976026	1540
1545	4 462	0 6495118	64397277	4 242	0 6276095	68997083	1545
1550	4 455	0 6488450	64416930	4 236	0 6269444	69018139	1550
1555	4 448	0 6481804	64436582	4 230	0 6262817	69039195	1555
1560	4 441	0 6475181	64456235	4 223	0 6256211	69060251	1560
1565	4 435	0 6468579	64475887	4 217	0 6249628	69081308	1565
1570	4 428	0 6461999	64495540	4 210	0 6243066	69102364	1570
1575	4 421	0 6455443	64515192	4 204	0 6236528	69123420	1575
1580	4 415	0 6448908	64534845	4 198	0 6230011	69144476	1580
1585	4 408	0 6442395	64554497	4 191	0 6223516	69165533	1585
1590	4 401	0 6435903	64574150	4 185	0 6217042	69186589	1590
1595	4 395	0 6429432	64593802	4 179	0 6210589	69207645	1595
1600	4 388	0 6422983	64613455	4 173	0 6204158	69228701	1600
1605	4 382	0 6416555	64633107	4 167	0 6197748	69249758	1605
1610	4 375	0 6410148	64652760	4 160	0 6191359	69270814	1610
1615	4 369	0 6403763	64672412	4 154	0 6184991	69291870	1615
1620	4 363	0 6397397	64692065	4 148	0 6178643	69312926	1620
1625	4 356	0 6391052	64711717	4 142	0 6172316	69333983	1625
1630	4 350	0 6384728	64731370	4 136	0 6166010	69355039	1630
1635	4 344	0 6378424	64751022	4 130	0 6159724	69376095	1635
1640	4 337	0 6372141	64770675	4 124	0 6153458	69397151	1640
1645	4 331	0 6365878	64790327	4 118	0 6147213	69418208	1645
1650	4 325	0 6359634	64809980	4 112	0 6140988	69439264	1650
1655	4 319	0 6353411	64829632	4 107	0 6134783	69460320	1655
1660	4 313	0 6347208	64849285	4 101	0 6128598	69481376	1660
1665	4 306	0 6341024	64868937	4 095	0 6122432	69502433	1665
1670	4 300	0 6334860	64888590	4 089	0 6116285	69523489	1670
1675	4 294	0 6328715	64908242	4 083	0 6110158	69544545	1675
1680	4 288	0 6322589	64927895	4 078	0 6104050	69565601	1680
1685	4 282	0 6316483	64947547	4 072	0 6097962	69586658	1685
1690	4 276	0 6310396	64967200	4 066	0 6091893	69607714	1690
1695	4 270	0 6304328	64986852	4 061	0 6085842	69628770	1695
1700	4 264	0 6298279	65006505	4 055	0 6079811	69649826	1700

Sine of Inclination (1 over)	n = ·017			n = ·020			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1455	3·993	0·6012510	·77767146	3·574	0·5531014	·91490760	1455
1460	3·986	0·6005462	·77791010	3·568	0·5524012	·91518835	1460
1465	3·980	0·5998438	·77814874	3·562	0·5517035	·91546910	1465
1470	3·973	0·5991439	·77838737	3·556	0·5510083	·91574985	1470
1475	3·967	0·5984467	·77862601	3·551	0·5503157	·91603060	1475
1480	3·961	0·5977518	·77886465	3·545	0·5496255	·91631135	1480
1485	3·954	0·5970595	·77910329	3·539	0·5489379	·91659210	1485
1490	3·948	0·5963696	·77934192	3·534	0·5482527	·91687285	1490
1495	3·942	0·5956821	·77958056	3·528	0·5475699	·91715360	1495
1500	3·935	0·5949970	·77981920	3·523	0·5468895	·91743435	1500
1505	3·929	0·5943143	·78005784	3·517	0·5462116	·91771510	1505
1510	3·923	0·5936341	·78029647	3·512	0·5455361	·91799585	1510
1515	3·917	0·5929563	·78053511	3·506	0·5448629	·91827660	1515
1520	3·911	0·5922808	·78077375	3·501	0·5441921	·91855735	1520
1525	3·905	0·5916077	·78101239	3·496	0·5435236	·91883810	1525
1530	3·899	0·5909369	·78125102	3·490	0·5428575	·91911885	1530
1535	3·893	0·5902683	·78148966	3·485	0·5421937	·91939960	1535
1540	3·887	0·5896021	·78172830	3·480	0·5415321	·91968035	1540
1545	3·881	0·5889382	·78196694	3·474	0·5408728	·91996110	1545
1550	3·875	0·5882765	·78220557	3·469	0·5402158	·92024185	1550
1555	3·869	0·5876172	·78244421	3·464	0·5395612	·92052260	1555
1560	3·863	0·5869601	·78268285	3·459	0·5389088	·92080335	1560
1565	3·857	0·5863051	·78292149	3·453	0·5382585	·92108410	1565
1570	3·852	0·5856524	·78316012	3·448	0·5376104	·92136485	1570
1575	3·856	0·5850019	·78339876	3·443	0·5369646	·92164560	1575
1580	3·840	0·5843537	·78363740	3·438	0·5363210	·92192635	1580
1585	3·834	0·5837075	·78387604	3·433	0·5356795	·92220710	1585
1590	3·829	0·5830635	·78411467	3·428	0·5350402	·92248785	1590
1595	3·823	0·5824217	·78435331	3·423	0·5344030	·92276860	1595
1600	3·818	0·5817819	·78459195	3·418	0·5337679	·92304935	1600
1605	3·812	0·5811443	·78483059	3·413	0·5331350	·92333010	1605
1610	3·806	0·5805088	·78506922	3·408	0·5325042	·92361085	1610
1615	3·801	0·5798754	·78530786	3·403	0·5318755	·92389160	1615
1620	3·795	0·5792440	·78554650	3·398	0·5312487	·92417235	1620
1625	3·790	0·5786147	·78578514	3·393	0·5306241	·92445310	1625
1630	3·784	0·5779875	·78602377	3·388	0·5300016	·92473385	1630
1635	3·779	0·5773623	·78626241	3·384	0·5293811	·92501460	1635
1640	3·773	0·5767391	·78650105	3·379	0·5287625	·92529535	1640
1645	3·768	0·5761180	·78673969	3·374	0·5281460	·92557610	1645
1650	3·763	0·5754989	·78697832	3·369	0·5275316	·92585685	1650
1655	3·757	0·5748818	·78721696	3·364	0·5269192	·92613760	1655
1660	3·752	0·5742667	·78745560	3·360	0·5263087	·92641835	1660
1665	3·747	0·5736535	·78769424	3·355	0·5257001	·92669910	1665
1670	3·741	0·5730423	·78793287	3·350	0·5250935	·92697985	1670
1675	3·736	0·5724329	·78817151	3·346	0·5244888	·92726060	1675
1680	3·731	0·5718255	·78841015	3·341	0·5238861	·92754135	1680
1685	3·726	0·5712200	·78864879	3·336	0·5232853	·92782210	1685
1690	3·721	0·5706165	·78888742	3·332	0·5226864	·92810285	1690
1695	3·715	0·5700149	·78912606	3·327	0·5220894	·92838360	1695
1700	3·710	0·5694151	·78936470	3·323	0·5214943	·92866435	1700

Sine of Inclination 1 over,	n = 0225			n = 0250			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1455	3 310	0 5197954	1 0292711	3 099	0 4911800	1 1436345	1455
1460	3 304	0 5190988	1 0295869	3 094	0 4904867	1 1439854	1460
1465	3 299	0 5184047	1 0299027	3 089	0 4897958	1 1443361	1465
1470	3 294	0 5177131	1 0302186	3 084	0 4891075	1 1446873	1470
1475	3 289	0 5170240	1 0305344	3 079	0 4884217	1 1450383	1475
1480	3 284	0 5163374	1 0308503	3 074	0 4877384	1 1453892	1480
1485	3 278	0 5156533	1 0311661	3 069	0 4870576	1 1457401	1485
1490	3 273	0 5149717	1 0314820	3 065	0 4863793	1 1460911	1490
1495	3 268	0 5142925	1 0317978	3 060	0 4857033	1 1464420	1495
1500	3 263	0 5136156	1 0321136	3 055	0 4850297	1 1467929	1500
1505	3 258	0 5129412	1 0324295	3 050	0 4843586	1 1471439	1505
1510	3 253	0 5122693	1 0327453	3 046	0 4836899	1 1474948	1510
1515	3 248	0 5115997	1 0330612	3 041	0 4830236	1 1478458	1515
1520	3 243	0 5109324	1 0333770	3 036	0 4823597	1 1481967	1520
1525	3 238	0 5102675	1 0336929	3 032	0 4816981	1 1485476	1525
1530	3 233	0 5096049	1 0340087	3 027	0 4810388	1 1488986	1530
1535	3 228	0 5089446	1 0343246	3 023	0 4803818	1 1492495	1535
1540	3 223	0 5082866	1 0346404	3 018	0 4797270	1 1496004	1540
1545	3 218	0 5076310	1 0349562	3 014	0 4790746	1 1499514	1545
1550	3 213	0 5069775	1 0352721	3 009	0 4784245	1 1503023	1550
1555	3 209	0 5063264	1 0355879	3 005	0 4777766	1 1506533	1555
1560	3 204	0 5056775	1 0359038	3 000	0 4771310	1 1510042	1560
1565	3 199	0 5050308	1 0362196	2 996	0 4764875	1 1513551	1565
1570	3 194	0 5043862	1 0365355	2 991	0 4758462	1 1517061	1570
1575	3 190	0 5037440	1 0368513	2 987	0 4752073	1 1520570	1575
1580	3 185	0 5031040	1 0371671	2 982	0 4745705	1 1524079	1580
1585	3 180	0 5024660	1 0374830	2 978	0 4739358	1 1527589	1585
1590	3 176	0 5018302	1 0377988	2 974	0 4733033	1 1531098	1590
1595	3 171	0 5011966	1 0371147	2 969	0 4726729	1 1534608	1595
1600	3 166	0 5005651	1 0374305	2 965	0 4720447	1 1538117	1600
1605	3 162	0 4999357	1 0377464	2 961	0 4714186	1 1541626	1605
1610	3 157	0 4993084	1 0380622	2 957	0 4707946	1 1545136	1610
1615	3 153	0 4986832	1 0383781	2 952	0 4701726	1 1548645	1615
1620	3 148	0 4980600	1 0386939	2 948	0 4695527	1 1552154	1620
1625	3 144	0 4974389	1 0390097	2 944	0 4689349	1 1555664	1625
1630	3 139	0 4968199	1 0393256	2 940	0 4683192	1 1559173	1630
1635	3 135	0 4962029	1 0396414	2 936	0 4677055	1 1562683	1635
1640	3 130	0 4955879	1 0399573	2 932	0 4670937	1 1566192	1640
1645	3 126	0 4949750	1 0402731	2 927	0 4664840	1 1569701	1645
1650	3 122	0 4943641	1 0405890	2 923	0 4658764	1 1573211	1650
1655	3 117	0 4937552	1 0409048	2 919	0 4652707	1 1576720	1655
1660	3 113	0 4931482	1 0422206	2 915	0 4646670	1 1580229	1660
1665	3 108	0 4925432	1 0425365	2 911	0 4640653	1 1583739	1665
1670	3 104	0 4919402	1 0428523	2 907	0 4634655	1 1587248	1670
1675	3 100	0 4913390	1 0431682	2 903	0 4628676	1 1590758	1675
1680	3 096	0 4907398	1 0434840	2 899	0 4622716	1 1594267	1680
1685	3 091	0 4901425	1 0437999	2 895	0 4616776	1 1597776	1685
1690	3 087	0 4895472	1 0441157	2 891	0 4610855	1 1601286	1690
1695	3 083	0 4889537	1 0444316	2 887	0 4604953	1 1604795	1695
1700	3 079	0 4883621	1 0447474	2 883	0 4599070	1 1608304	1700

Sine of Inclination (1 over)	n = ·017			n = ·020			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1455	3·993	0·6012510	·77767146	3·574	0·5531014	·91490760	1455
1460	3·986	0·6005462	·77791010	3·568	0·5524012	·91518835	1460
1465	3·980	0·5998438	·77814874	3·562	0·5517035	·91546910	1465
1470	3·973	0·5991439	·77838737	3·556	0·5510083	·91574985	1470
1475	3·967	0·5984467	·77862601	3·551	0·5503157	·91603060	1475
1480	3·961	0·5977518	·77886465	3·545	0·5496255	·91631135	1480
1485	3·954	0·5970595	·77910329	3·539	0·5489379	·91659210	1485
1490	3·948	0·5963696	·77934192	3·534	0·5482527	·91687285	1490
1495	3·942	0·5956821	·77958056	3·528	0·5475699	·91715360	1495
1500	3·935	0·5949970	·77981920	3·523	0·5468895	·91743435	1500
1505	3·929	0·5943143	·78005784	3·517	0·5462116	·91771510	1505
1510	3·923	0·5936341	·78029647	3·512	0·5455361	·91799585	1510
1515	3·917	0·5929563	·78053511	3·506	0·5448629	·91827660	1515
1520	3·911	0·5922808	·78077375	3·501	0·5441921	·91855735	1520
1525	3·905	0·5916077	·78101239	3·496	0·5435236	·91883810	1525
1530	3·899	0·5909369	·78125102	3·490	0·5428575	·91911885	1530
1535	3·893	0·5902683	·78148966	3·485	0·5421937	·91939960	1535
1540	3·887	0·5896021	·78172830	3·480	0·5415321	·91968035	1540
1545	3·881	0·5889382	·78196694	3·474	0·5408728	·91996110	1545
1550	3·875	0·5882765	·78220557	3·469	0·5402158	·92024185	1550
1555	3·869	0·5876172	·78244421	3·464	0·5395612	·92052260	1555
1560	3·863	0·5869601	·78268285	3·459	0·5389088	·92080335	1560
1565	3·857	0·5863051	·78292149	3·453	0·5382585	·92108410	1565
1570	3·852	0·5856524	·78316012	3·448	0·5376104	·92136485	1570
1575	3·856	0·5850019	·78339876	3·443	0·5369646	·92164560	1575
1580	3·840	0·5843537	·78363740	3·438	0·5363210	·92192635	1580
1585	3·834	0·5837075	·78387604	3·433	0·5356795	·92220710	1585
1590	3·829	0·5830635	·78411467	3·428	0·5350402	·92248785	1590
1595	3·823	0·5824217	·78435331	3·423	0·5344030	·92276860	1595
1600	3·818	0·5817819	·78459195	3·418	0·5337679	·92304935	1600
1605	3·812	0·5811443	·78483059	3·413	0·5331350	·92333010	1605
1610	3·806	0·5805088	·78506922	3·408	0·5325042	·92361085	1610
1615	3·801	0·5798754	·78530786	3·403	0·5318755	·92389160	1615
1620	3·795	0·5792440	·78554650	3·398	0·5312487	·92417235	1620
1625	3·790	0·5786147	·78578514	3·393	0·5306241	·92445310	1625
1630	3·784	0·5779875	·78602377	3·388	0·5300016	·92473385	1630
1635	3·779	0·5773623	·78626241	3·384	0·5293811	·92501460	1635
1640	3·773	0·5767391	·78650105	3·379	0·5287625	·92529535	1640
1645	3·768	0·5761180	·78673969	3·374	0·5281460	·92557610	1645
1650	3·763	0·5754989	·78697832	3·369	0·5275316	·92585685	1650
1655	3·757	0·5748818	·78721696	3·364	0·5269192	·92613760	1655
1660	3·752	0·5742667	·78745560	3·360	0·5263087	·92641835	1660
1665	3·747	0·5736535	·78769424	3·355	0·5257001	·92669910	1665
1670	3·741	0·5730423	·78793287	3·350	0·5250935	·92697985	1670
1675	3·736	0·5724329	·78817151	3·346	0·5244888	·92726060	1675
1680	3·731	0·5718255	·78841015	3·341	0·5238861	·92754135	1680
1685	3·726	0·5712200	·78864879	3·336	0·5232853	·92782210	1685
1690	3·721	0·5706165	·78888742	3·332	0·5226864	·92810285	1690
1695	3·715	0·5700149	·78912606	3·327	0·5220894	·92838360	1695
1700	3·710	0·5694151	·78936470	3·323	0·5214943	·92866435	1700

Sine of Inclination 1 over	n = 0225			n = ·0250			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1455	3 310	0 5197954	1 0292711	3 099	0 4911800	1 1436345	1455
1460	3 304	0 5190988	1 0295869	3 094	0 4904867	1 1439854	1460
1465	3 299	0 5184047	1 0299027	3 089	0 4897958	1 1443361	1465
1470	3 294	0 5177131	1 0302186	3 084	0 4891075	1 1446873	1470
1475	3 289	0 5170240	1 0305344	3 079	0 4884217	1 1450383	1475
1480	3 284	0 5163374	1 0308503	3 074	0 4877384	1 1453892	1480
1485	3 278	0 5156533	1 0311661	3 069	0 4870576	1 1457401	1485
1490	3 273	0 5149717	1 0314820	3 065	0 4863793	1 1460911	1490
1495	3 268	0 5142925	1 0317978	3 060	0 4857033	1 1464420	1495
1500	3 263	0 5136156	1 0321136	3 055	0 4850297	1 1467929	1500
1505	3 258	0 5129412	1 0324295	3 050	0 4843586	1 1471439	1505
1510	3 253	0 5122693	1 0327453	3 046	0 4836899	1 1474948	1510
1515	3 248	0 5115997	1 0330612	3 041	0 4830236	1 1478458	1515
1520	3 243	0 5109324	1 0333770	3 036	0 4823597	1 1481967	1520
1525	3 238	0 5102675	1 0336929	3 032	0 4816981	1 1485476	1525
1530	3 233	0 5096049	1 0340087	3 027	0 4810388	1 1488986	1530
1535	3 228	0 5089446	1 0343246	3 023	0 4803818	1 1492495	1535
1540	3 223	0 5082866	1 0346404	3 018	0 4797270	1 1496004	1540
1545	3 218	0 5076310	1 0349562	3 014	0 4790746	1 1499514	1545
1550	3 213	0 5069775	1 0352721	3 009	0 4784245	1 1503023	1550
1555	3 209	0 5063264	1 0355879	3 005	0 4777766	1 1506533	1555
1560	3 204	0 5056775	1 0359038	3 000	0 4771310	1 1510042	1560
1565	3 199	0 5050308	1 0362196	2 996	0 4764875	1 1513551	1565
1570	3 194	0 5043862	1 0365355	2 991	0 4758462	1 1517061	1570
1575	3 190	0 5037440	1 0368513	2 987	0 4752073	1 1520570	1575
1580	3 185	0 5031040	1 0371671	2 982	0 4745705	1 1524079	1580
1585	3 180	0 5024660	1 0374830	2 978	0 4739358	1 1527589	1585
1590	3 176	0 5018302	1 0377988	2 974	0 4733033	1 1531098	1590
1595	3 171	0 5011966	1 0371147	2 969	0 4726729	1 1534608	1595
1600	3 166	0 5005651	1 0374305	2 965	0 4720447	1 1538117	1600
1605	3 162	0 4999357	1 0377464	2 961	0 4714186	1 1541626	1605
1610	3 157	0 4993084	1 0380622	2 957	0 4707946	1 1545136	1610
1615	3 153	0 4986832	1 0383781	2 952	0 4701726	1 1548645	1615
1620	3 148	0 4980600	1 0386939	2 948	0 4695527	1 1552154	1620
1625	3 144	0 4974389	1 0390097	2 944	0 4689349	1 1555664	1625
1630	3 139	0 4968199	1 0393256	2 940	0 4683192	1 1559173	1630
1635	3 135	0 4962029	1 0396414	2 936	0 4677055	1 1562683	1635
1640	3 130	0 4955879	1 0399573	2 932	0 4670937	1 1566192	1640
1645	3 126	0 4949750	1 0402731	2 927	0 4664840	1 1569701	1645
1650	3 122	0 4943641	1 0405890	2 923	0 4658764	1 1573211	1650
1655	3 117	0 4937552	1 0409048	2 919	0 4652707	1 1576720	1655
1660	3 113	0 4931482	1 0412206	2 915	0 4646670	1 1580229	1660
1665	3 108	0 4925432	1 0415365	2 911	0 4640653	1 1583739	1665
1670	3 104	0 4919402	1 0418523	2 907	0 4634655	1 1587248	1670
1675	3 100	0 4913390	1 0421682	2 903	0 4628676	1 1590758	1675
1680	3 096	0 4907398	1 0424840	2 899	0 4622716	1 1594267	1680
1685	3 091	0 4901425	1 0427999	2 895	0 4616776	1 1597776	
1690	3 087	0 4895472	1 0431157	2 891	0 4610855	1 1601	
1695	3 083	0 4889537	1 0434316	2 887	0 4604953	1	
1700	3 079	0 4883621	1 0437474	2 883	0 4599070	1	

Sine of Inclination (1 over)	n = ·0275			n = ·030			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1455	2·926	0·4662783	1·2579980	2·782	0·4443775	1·3723614	1455
1460	2·921	0·4655880	1·2583840	2·778	0·4436900	1·3727825	1460
1465	2·917	0·4649002	1·2587700	2·773	0·4430051	1·3732037	1465
1470	2·912	0·4642149	1·2591560	2·769	0·4423226	1·3736248	1470
1475	2·908	0·4635322	1·2595421	2·765	0·4416427	1·3740459	1475
1480	2·903	0·4628519	1·2599281	2·760	0·4409652	1·3744670	1480
1485	2·899	0·4621742	1·2603141	2·756	0·4402903	1·3748882	1485
1490	2·894	0·4614989	1·2607002	2·752	0·4396178	1·3753093	1490
1495	2·888	0·4608260	1·2610862	2·748	0·4389477	1·3757304	1495
1500	2·885	0·4601554	1·2614722	2·743	0·4382800	1·3761515	1500
1505	2·881	0·4594874	1·2618583	2·739	0·4376148	1·3765727	1505
1510	2·876	0·4588218	1·2622443	2·735	0·4369519	1·3769938	1510
1515	2·872	0·4581585	1·2626303	2·731	0·4362915	1·3774149	1515
1520	2·867	0·4574976	1·2630164	2·727	0·4356334	1·3778360	1520
1525	2·863	0·4568390	1·2634024	2·723	0·4349776	1·3782572	1525
1530	2·859	0·4561827	1·2637884	2·718	0·4343242	1·3786783	1530
1535	2·854	0·4555287	1·2641745	2·714	0·4336730	1·3790994	1535
1540	2·850	0·4548770	1·2645605	2·710	0·4330241	1·3795205	1540
1545	2·846	0·4542276	1·2649465	2·706	0·4323775	1·3799417	1545
1550	2·842	0·4535805	1·2653325	2·702	0·4317332	1·3803628	1550
1555	2·837	0·4529357	1·2657186	2·698	0·4310912	1·3807839	1555
1560	2·833	0·4522931	1·2661046	2·694	0·4304514	1·3812050	1560
1565	2·829	0·4516527	1·2664906	2·690	0·4298137	1·3816262	1565
1570	2·825	0·4510144	1·2668767	2·686	0·4291783	1·3820473	1570
1575	2·821	0·4503785	1·2672627	2·683	0·4285452	1·3824684	1575
1580	2·817	0·4497447	1·2676487	2·679	0·4279143	1·3828895	1580
1585	2·813	0·4491131	1·2680348	2·675	0·4272855	1·3833107	1585
1590	2·809	0·4484836	1·2684208	2·671	0·4266588	1·3837318	1590
1595	2·805	0·4478562	1·2688068	2·667	0·4260343	1·3841529	1595
1600	2·800	0·4472310	1·2691929	2·663	0·4254118	1·3845740	1600
1605	2·796	0·4466079	1·2695789	2·659	0·4247915	1·3849952	1605
1610	2·792	0·4459869	1·2699649	2·656	0·4241733	1·3854163	1610
1615	2·788	0·4453680	1·2703510	2·652	0·4235572	1·3858374	1615
1620	2·785	0·4447511	1·2707370	2·648	0·4229431	1·3862585	1620
1625	2·781	0·4441363	1·2711230	2·644	0·4223311	1·3866797	1625
1630	2·777	0·4435236	1·2715090	2·641	0·4217212	1·3871008	1630
1635	2·773	0·4429129	1·2718951	2·637	0·4211133	1·3875219	1635
1640	2·769	0·4423042	1·2722811	2·633	0·4205073	1·3879430	1640
1645	2·765	0·4416975	1·2726671	2·630	0·4199035	1·3883642	1645
1650	2·761	0·4410929	1·2730532	2·626	0·4193017	1·3887853	1650
1655	2·757	0·4404902	1·2734392	2·622	0·4187018	1·3892064	1655
1660	2·754	0·4398895	1·2738252	2·619	0·4181039	1·3896275	1660
1665	2·750	0·4392908	1·2742113	2·615	0·4175080	1·3900487	1665
1670	2·746	0·4386940	1·2745973	2·612	0·4169140	1·3904698	1670
1675	2·742	0·4380992	1·2749833	2·608	0·4163218	1·3908909	1675
1680	2·738	0·4375062	1·2753694	2·605	0·4157317	1·3913120	1680
1685	2·735	0·4369152	1·2757554	2·601	0·4151435	1·3917332	1685
1690	2·731	0·4363261	1·2761414	2·598	0·4145572	1·3921543	1690
1695	2·727	0·4357389	1·2765275	2·594	0·4139728	1·3925754	1695
1700	2·724	0·4351536	1·2769135	2·591	0·4133903	1·3929965	1700

Sine of Inclination (1 over)	n = 035			n = 050			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1455	2 556	0 4075620	1 6010883	2 149	0 3322334	2 2872690	1455
1460	2 552	0 4068797	1 6015796	2 146	0 3315629	2 2879709	1460
1465	2 548	0 4061998	1 6020709	2 142	0 3308949	2 2886728	1465
1470	2 544	0 4055224	1 6025622	2 139	0 3302293	2 2893746	1470
1475	2 540	0 4048476	1 6030536	2 136	0 3295663	2 2900765	1475
1480	2 536	0 4041752	1 6035449	2 133	0 3289058	2 2907784	1480
1485	2 532	0 4035053	1 6040362	2 129	0 3282477	2 2914803	1485
1490	2 528	0 4028379	1 6045275	2 126	0 3275921	2 2921821	1490
1495	2 524	0 4021729	1 6050188	2 123	0 3269389	2 2928840	1495
1500	2 521	0 4015102	1 6055101	2 120	0 3262881	2 2935859	1500
1505	2 517	0 4008501	1 6060014	2 117	0 3256397	2 2942878	1505
1510	2 513	0 4001923	1 6064927	2 113	0 3249937	2 2949896	1510
1515	2 509	0 3995369	1 6069841	2 110	0 3243501	2 2956915	1515
1520	2 505	0 3988839	1 6074754	2 107	0 3237088	2 2963934	1520
1525	2 502	0 3982332	1 6079667	2 104	0 3230699	2 2970953	1525
1530	2 498	0 3975847	1 6084580	2 101	0 3224333	2 2977971	1530
1535	2 494	0 3969386	1 6089493	2 098	0 3217990	2 2984990	1535
1540	2 491	0 3962948	1 6094406	2 095	0 3211669	2 2992009	1540
1545	2 487	0 3956533	1 6099319	2 092	0 3205372	2 2999028	1545
1550	2 483	0 3950141	1 6104232	2 089	0 3199097	2 3006046	1550
1555	2 480	0 3943771	1 6109146	2 086	0 3192846	2 3013065	1555
1560	2 476	0 3937423	1 6114059	2 083	0 3186616	2 3020084	1560
1565	2 472	0 3931098	1 6118972	2 080	0 3180408	2 3027103	1565
1570	2 469	0 3924794	1 6123885	2 077	0 3174222	2 3034121	1570
1575	2 465	0 3918513	1 6128798	2 074	0 3168058	2 3041140	1575
1580	2 462	0 3912254	1 6133711	2 071	0 3161917	2 3048159	1580
1585	2 458	0 3906016	1 6138624	2 068	0 3155796	2 3055178	1585
1590	2 455	0 3899800	1 6143537	2 065	0 3149698	2 3062196	1590
1595	2 451	0 3893605	1 6148451	2 062	0 3143620	2 3069215	1595
1600	2 448	0 3887431	1 6153364	2 059	0 3137563	2 3076234	1600
1605	2 444	0 3881279	1 6158277	2 057	0 3131528	2 3083253	1605
1610	2 441	0 3875147	1 6163190	2 054	0 3125514	2 3090271	1610
1615	2 437	0 3869036	1 6168103	2 051	0 3119521	2 3097290	1615
1620	2 434	0 3862946	1 6173016	2 048	0 3113547	2 3104309	1620
1625	2 430	0 3856876	1 6177929	2 045	0 3107595	2 3111328	1625
1630	2 427	0 3850827	1 6182842	2 043	0 3101663	2 3118346	1630
1635	2 424	0 3844799	1 6187756	2 040	0 3095752	2 3125365	1635
1640	2 420	0 3838790	1 6192669	2 037	0 3089860	2 3132384	1640
1645	2 417	0 3832802	1 6197582	2 034	0 3083989	2 3139403	1645
1650	2 414	0 3826834	1 6202495	2 031	0 3078138	2 3146421	1650
1655	2 410	0 3820886	1 6207408	2 029	0 3072306	2 3153440	1655
1660	2 407	0 3814957	1 6212321	2 026	0 3066495	2 3160459	1660
1665	2 404	0 3809048	1 6217234	2 023	0 3060702	2 3167478	1665
1670	2 401	0 3803158	1 6222147	2 021	0 3054930	2 3174496	1670
1675	2 397	0 3797287	1 6227061	2 018	0 3049176	2 3181515	1675
1680	2 394	0 3791436	1 6231974	2 015	0 3043441	2 3188534	1680
1685	2 391	0 3785604	1 6236887	2 013	0 3037726	2 3195553	1685
1690	2 388	0 3779791	1 6241800	2 010	0 3032030	2 3202571	1690
1695	2 385	0 3773997	1 6246713	2 007	0 3026352	2 3209590	1695
1700	2 381	0 3768222	1 6251626	2 005	0 3020694	2 3216609	1700

Sine of Inclination (1 over)	n = ·009			n = ·010			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1705	5·999	0·7780736	·41802531	5·512	0·7412714	·46447255	1705
1710	5·990	0·7774623	·41815164	5·504	0·7406623	·46461293	1710
1715	5·982	0·7768529	·41827798	5·496	0·7400550	·46475330	1715
1720	5·974	0·7762454	·41840432	5·488	0·7394497	·46489368	1720
1725	5·965	0·7756397	·41853066	5·481	0·7388462	·46503405	1725
1730	5·957	0·7750358	·41865699	5·473	0·7382445	·46517443	1730
1735	5·949	0·7744337	·41878333	5·466	0·7376446	·46531480	1735
1740	5·941	0·7738334	·41890967	5·458	0·7370464	·46545518	1740
1745	5·932	0·7732349	·41903601	5·451	0·7364501	·46559555	1745
1750	5·924	0·7726382	·41916234	5·443	0·7358556	·46573593	1750
1755	5·916	0·7720432	·41928868	5·436	0·7352628	·46587630	1755
1760	5·908	0·7714500	·41941502	5·428	0·7346717	·46601668	1760
1765	5·900	0·7708586	·41954136	5·421	0·7340825	·46615705	1765
1770	5·892	0·7702690	·41966769	5·414	0·7334951	·46629743	1770
1775	5·884	0·7696810	·41979403	5·406	0·7329093	·46643780	1775
1780	5·876	·07690948	·41992037	5·399	0·7323253	·46657818	1780
1785	5·868	·07685123	·42004671	5·392	0·7317430	·46671855	1785
1790	5·860	·07679275	·42017304	5·385	0·7311623	·46685893	1790
1795	5·853	·07673465	·42029938	5·378	0·7305834	·46699930	1795
1800	5·845	·07667670	·42042572	5·370	0·7300060	·46713968	1800
1805	5·837	·07661892	·42055206	5·363	0·7294304	·46728005	1805
1810	5·829	·07656130	·42067839	5·356	0·7288564	·46742043	1810
1815	5·822	·07650386	·42080473	5·349	0·7282842	·46756080	1815
1820	5·814	·07644657	·42093107	5·342	0·7277136	·46770118	1820
1825	5·806	·07638946	·42105741	5·335	0·7271446	·46784155	1825
1830	5·799	·07633251	·42118373	5·328	0·7265773	·46798193	1830
1835	5·791	·07627572	·42131007	5·321	0·7260115	·46812230	1835
1840	5·784	·07621909	·42143641	5·314	0·7254473	·46826268	1840
1845	5·776	·07616262	·42156275	5·307	0·7248848	·46840305	1845
1850	5·769	·07610630	·42168908	5·301	0·7243238	·46854343	1850
1855	5·761	0·7605015	·42181542	5·294	0·7237644	·46868380	1855
1860	5·754	0·7599416	·42194176	5·287	0·7232067	·46882418	1860
1865	5·746	0·7593832	·42206810	5·280	0·7226505	·46896455	1865
1870	5·739	0·7588264	·42219443	5·273	0·7220959	·46910493	1870
1875	5·732	0·7582712	·42232077	5·267	0·7215428	·46924530	1875
1880	5·724	0·7577175	·42244711	5·260	0·7209912	·46938568	1880
1885	5·717	0·7571652	·42257345	5·253	0·7204411	·46952605	1885
1890	5·710	0·7566146	·42269978	5·247	0·7198927	·46966643	1890
1895	5·703	0·7560655	·42282612	5·240	0·7193457	·46980680	1895
1900	5·695	0·7555179	·42295246	5·234	0·7188002	·46994718	1900
1905	5·688	0·7	07880	5·227	0·	·47008755	1905
1910	5·681	0·	0513	5·221	0	7022793	1910
1915	5·674	0	147	5·214		36830	1915
1920	5·667	0	81	5·208		0868	1920
1925	5·660	0	5	5·201		905	1925
1930	5·653	0·		5·195	0	43	1930
1935	5·646	0·7		5·188	0	0	1935
1940	5·639	0·7		5·182	0·	8	1940
1945	5·632	0·7		5·176	0·		1945
950	5·625	0·7		5·169	0·		1950

Sine of Inclination (1 over)	n = 011			n = 012			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1705	5 113	0 7086531	51091981	4 780	0 6794651	55736706	1705
1710	5 106	0 7080461	51107422	4 774	0 6788601	55753551	1710
1715	5 098	0 7074410	51122863	4 767	0 6782570	55770396	1715
1720	5 091	0 7068377	51138304	4 761	0 6776557	55787241	1720
1725	5 084	0 7062363	51153746	4 754	0 6770563	55804086	1725
1730	5 077	0 7056367	51169187	4 747	0 6764587	55820931	1730
1735	5 070	0 7050389	51184628	4 741	0 6758629	55837776	1735
1740	5 063	0 7044429	51200069	4 734	0 6752689	55854621	1740
1745	5 056	0 7038486	51215511	4 728	0 6746766	55871466	1745
1750	5 050	0 7032561	51230952	4 722	0 6740862	55888311	1750
1755	5 043	0 7026654	51246393	4 715	0 6734975	55905156	1755
1760	5 036	0 7020765	51261834	4 709	0 6729105	55922001	1760
1765	5 029	0 7014894	51277276	4 702	0 6723254	55938846	1765
1770	5 022	0 7009040	51292717	4 696	0 6717420	55955691	1770
1775	5 016	0 7003203	51308158	4 690	0 6711604	55972536	1775
1780	5 009	0 6997384	51323599	4 684	0 6705804	55989381	1780
1785	5 002	0 6991582	51339041	4 677	0 6700022	56006226	1785
1790	4 996	0 6985797	51354482	4 671	0 6694257	56023071	1790
1795	4 989	0 6980027	51369923	4 665	0 6688508	56039916	1795
1800	4 982	0 6974274	51385364	4 659	0 6682776	56056761	1800
1805	4 976	0 6968538	51400806	4 653	0 6677060	56073606	1805
1810	4 969	0 6962820	51416247	4 647	0 6671361	56090451	1810
1815	4 963	0 6957119	51431688	4 641	0 6665680	56107296	1815
1820	4 956	0 6951433	51447129	4 635	0 6660014	56124141	1820
1825	4 950	0 6945764	51462571	4 628	0 6654365	56140986	1825
1830	4 943	0 6940111	51478012	4 622	0 6648732	56157831	1830
1835	4 937	0 6934475	51493453	4 616	0 6643116	56174676	1835
1840	4 930	0 6928853	51508894	4 611	0 6637515	56191521	1840
1846	4 924	0 6923249	51524336	4 605	0 6631931	56208366	1845
1850	4 918	0 6917660	51539777	4 599	0 6626362	56225211	1850
1855	4 911	0 6912087	51555218	4 593	0 6620809	56242056	1855
1860	4 905	0 6906530	51570659	4 587	0 6615272	56258901	1860
1865	4 899	0 6900990	51586101	4 581	0 6609751	56275746	1865
1870	4 893	0 6895464	51601542	4 575	0 6604245	56292591	1870
1875	4 886	0 6889954	51616983	4 570	0 6598755	56309436	1875
1880	4 880	0 6884460	51632424	4 564	0 6593281	56326281	1880
1885	4 874	0 6878980	51647866	4 558	0 6587821	56343126	1885
1890	4 868	0 6873515	51663307	4 552	0 6582377	56359971	1890
1895	4 862	0 6868067	51678748	4 547	0 6576948	56376861	1895
1900	4 856	0 6862633	51694189	4 541	0 6571534	56393616	1900
1905	4 850	0 6857214	51709631	4 535	0 6566135	56410506	1905
1910	4 844	0 6851809	51725072	4 530	0 6560751	56427351	1910
1915	4 838	0 6846421	51740513	4 524	0 6555382	56444196	1915
1920	4 832	0 6841047	51755954	4 519	0 6550028	56461041	1920
1925	4 826	0 6835687	51771396	4 513	0 6544687	56477886	1925
1930	4 820	0 6830341	51786837	4 508	0 6539362	56494731	1930
1935	4 814	0 6825011	51802278	4 502	0 6534051	56511576	1935
1940	4 808	0 6819696	51817719	4 497	0 6528755	56528421	1940
1945	4 802	0 6814395	51833161	4 491	0 6523474	56545266	1945
1950	4 796	0 6809107	51848602	4 486	0 6518207	56562111	1950

Sine of Inclination (1 over)	n = ·013			n = ·014			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1705	4·499	0·6531366	·60381432	4·258	0·6292248	·65026157	1705
1710	4·493	0·6525335	·60399680	4·252	0·6286236	·65045810	1710
1715	4·487	0·6519323	·60417929	4·246	0·6280243	·65065462	1715
1720	4·481	0·6513330	·60436178	4·241	0·6274269	·65085115	1720
1725	4·474	0·6507355	·60454427	4·235	0·6268312	·65104767	1725
1730	4·468	0·6501398	·60472675	4·229	0·6262373	·65124420	1730
1735	4·462	0·6495459	·60490924	4·223	0·6256453	·65144072	1735
1740	4·456	0·6489538	·60509173	4·217	0·6250550	·65163725	1740
1745	4·450	0·6483635	·60527422	4·212	0·6244666	·65183377	1745
1750	4·444	0·6477750	·60545670	4·206	0·6238799	·65203030	1750
1755	4·438	0·6471882	·60563919	4·200	0·6232950	·65222682	1755
1760	4·432	0·6466032	·60582168	4·195	0·6227118	·65242335	1760
1765	4·426	0·6460200	·60600417	4·189	0·6221305	·65261987	1765
1770	4·420	0·6454385	·60618665	4·184	0·6215509	·65281640	1770
1775	4·414	0·6448588	·60636914	4·178	0·6209731	·65301292	1775
1780	4·408	0·6442808	·60655163	4·173	0·6203969	·65320945	1780
1785	4·403	0·6437045	·60673412	4·167	0·6198225	·65340597	1785
1790	4·397	0·6431299	·60691660	4·161	0·6192497	·65360250	1790
1795	4·391	0·6425570	·60709909	4·156	0·6186786	·65379902	1795
1800	4·385	0·6419856	·60728158	4·151	0·6181091	·65399555	1800
1805	4·379	0·6414160	·60746407	4·145	0·6175413	·65419207	1805
1810	4·374	0·6408480	·60764655	4·140	0·6169752	·65438860	1810
1815	4·368	0·6402818	·60782904	4·134	0·6164108	·65458512	1815
1820	4·362	0·6397172	·60801153	4·129	0·6158480	·65478165	1820
1825	4·357	0·6391542	·60819402	4·124	0·6152870	·65497817	1825
1830	4·351	0·6385929	·60837650	4·118	0·6147275	·65517470	1830
1835	4·345	0·6380332	·60855899	4·113	0·6141696	·65537122	1835
1840	4·340	0·6374750	·60874148	4·108	0·6136133	·65556775	1840
1845	4·334	0·6369184	·60892397	4·103	0·6130586	·65576427	1845
1850	4·329	0·6363635	·60910645	4·097	0·6125055	·65596080	1850
1855	4·323	0·6358101	·60928894	4·092	0·6119540	·65615732	1855
1860	4·318	0·6352584	·60947143	4·087	0·6114041	·65635385	1860
1865	4·312	0·6347082	·60965392	4·082	0·6108558	·65655037	1865
1870	4·307	0·6341596	·60983640	4·077	0·6103089	·65674690	1870
1875	4·301	0·6336125	·61001889	4·072	0·6097637	·65694342	1875
1880	4·296	0·6330669	·61020138	4·066	0·6092200	·65713995	1880
1885	4·291	0·6325228	·61038387	4·061	0·6086778	·65733647	1885
1890	4·285	0·6319804	·61056635	4·056	0·6081371	·65753300	1890
1895	4·280	0·6314394	·61074884	4·051	0·6075980	·65772952	1895
1900	4·275	0·6308999	·61093133	4·046	0·6070603	·65792605	1900
1905	4·269	0·6303619	·61111382	4·041	0·6065242	·65812257	1905
1910	4·264	0·6298254	·61129630	4·036	0·6059896	·65831910	1910
1915	4·259	0·6292904	·61147879	4·031	0·6054564	·65851562	1915
1920	4·254	0·6287569	·61166128	4·026	0·6049248	·65871215	1920
1925	4·248	0·6282248	·61184377	4·022	0·6043946	·65890867	1925
1930	4·243	0·6276942	·61202625	4·017	0·6038658	·65910520	1930
1935	4·238	0·6271652	·61220874	4·012	0·6033386	·65930172	1935
1940	4·233	0·6266375	·61239123	4·007	0·6028127	·65949825	1940
1945	4·228	0·6261113	·61257372	4·002	0·6022883	·65969477	1945
1950	4·223	0·6255865	·61275620	3·997	0·6017654	·65989130	1950

Sine of Inclination (1 over)	n = 015			n = 017			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1705	4 049	0 6073799	69670883	3 705	0 5688173	78960334	1705
1710	4 044	0 6067804	69691939	3 700	0 5682212	78984197	1710
1715	4 038	0 6061829	69712995	3 695	0 5676271	79008061	1715
1720	4 033	0 6055872	69734051	3 690	0 5670348	79031925	1720
1725	4 027	0 6049934	69755108	3 685	0 5664453	79055789	1725
1730	4 022	0 6044013	69776164	3 680	0 5658556	79079652	1730
1735	4 016	0 6038111	69797220	3 675	0 5652688	79103516	1735
1740	4 011	0 6032226	69818276	3 670	0 5646837	79127380	1740
1745	4 005	0 6026360	69839333	3 665	0 5641004	79151244	1745
1750	4 000	0 6020511	69860389	3 660	0 5635189	79175107	1750
1755	3 995	0 6014680	69881445	3 655	0 5629392	79198971	1755
1760	3 989	0 6008866	69902501	3 651	0 5623612	79222835	1760
1765	3 984	0 6003070	69923558	3 646	0 5617850	79246699	1765
1770	3 979	0 5997292	69944614	3 641	0 5612106	79270562	1770
1775	3 973	0 5991532	69965670	3 636	0 5606379	79294426	1775
1780	3 968	0 5985788	69986726	3 631	0 5600669	79318290	1780
1785	3 963	0 5980061	70007783	3 627	0 5594976	79342154	1785
1790	3 958	0 5974351	70028839	3 622	0 5589299	79366017	1790
1795	3 952	0 5968658	70049895	3 617	0 5583640	79389881	1795
1800	3 947	0 5962981	70070951	3 612	0 5577997	79413745	1800
1805	3 942	0 5957321	70092008	3 608	0 5572371	79437609	1805
1810	3 937	0 5951678	70113064	3 603	0 5566762	79461472	1810
1815	3 932	0 5946052	70134120	3 598	0 5561169	79485336	1815
1820	3 927	0 5940442	70155176	3 594	0 5555592	79509200	1820
1825	3 922	0 5934849	70176233	3 589	0 5550033	79533064	1825
1830	3 917	0 5929271	70197289	3 585	0 5544490	79556927	1830
1835	3 912	0 5923710	70218345	3 580	0 5538962	79580791	1835
1840	3 907	0 5918165	70239401	3 576	0 5533451	79604655	1840
1845	3 902	0 5912636	70260458	3 571	0 5527955	79628519	1845
1850	3 897	0 5907122	70281514	3 567	0 5522476	79652382	1850
1855	3 892	0 5901625	70302570	3 562	0 5517013	79676246	1855
1860	3 887	0 5896144	70323626	3 558	0 5511565	79700110	1860
1865	3 882	0 5890678	70344683	3 553	0 5506133	79723974	1865
1870	*3 877*	*0 5885228*	*70365739*	*3 549*	*0 5500717*	*79747837*	*1870*
1875	3 872	0 5879794	70386795	3 544	0 5495316	79771701	1875
1880	3 868	0 5874374	70407851	3 540	0 5489930	79795565	1880
1885	3 863	0 5868970	70428908	3 536	0 5484559	79819429	1885
1890	3 858	0 5863581	70449964	3 531	0 5479204	79843292	1890
1895	3 853	0 5858208	70471020	3 527	0 5473864	79867156	1895
1900	3 848	0 5852849	70492076	3 523	0 5468539	79891020	1900
1905	3 844	0 5847506	70513133	3 518	0 5463229	79914884	1905
1910	3 839	0 5842177	70534189	3 514	0 5457934	79938747	1910
1915	3 834	0 5836864	70555245	3 510	0 5452654	79962611	1915
1920	3 830	0 5831565	70576301	3 505	0 5447389	79986475	1920
1925	3 825	0 5826280	70597358	3 501	0 5442138	80010339	1925
1930	3 820	0 5821011	70618414	3 497	0 5436902	80034202	1930
1935	3 816	0 5815756	70639470	3 493	0 5431681	80058066	1935
1940	3 811	0 5810515	70660526	3 489	0 5426473	80081930	1940
1945	3 807	0 5805289	70681583	3 484	0 5421281	80105794	1945
1950	3 802	0 5800077	70702639	3 480	0 5416103	80129657	1950

Sine of Inclination (1 over)	n = ·013			n = ·014			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1705	4·499	0·6531366	·60381432	4·258	0·6292248	·65026157	1705
1710	4·493	0·6525335	·60399680	4·252	0·6286236	·65045810	1710
1715	4·487	0·6519323	·60417929	4·246	0·6280243	·65065462	1715
1720	4·481	0·6513330	·60436178	4·241	0·6274269	·65085115	1720
1725	4·474	0·6507355	·60454427	4·235	0·6268312	·65104767	1725
1730	4·468	0·6501398	·60472675	4·229	0·6262373	·65124420	1730
1735	4·462	0·6495459	·60490924	4·223	0·6256453	·65144072	1735
1740	4·456	0·6489538	·60509173	4·217	0·6250550	·65163725	1740
1745	4·450	0·6483635	·60527422	4·212	0·6244666	·65183377	1745
1750	4·444	0·6477750	·60545670	4·206	0·6238799	·65203030	1750
1755	4·438	0·6471882	·60563919	4·200	0·6232950	·65222682	1755
1760	4·432	0·6466032	·60582168	4·195	0·6227118	·65242335	1760
1765	4·426	0·6460200	·60600417	4·189	0·6221305	·65261987	1765
1770	4·420	0·6454385	·60618665	4·184	0·6215509	·65281640	1770
1775	4·414	0·6448588	·60636914	4·178	0·6209731	·65301292	1775
1780	4·408	0·6442808	·60655163	4·173	0·6203969	·65320945	1780
1785	4·403	0·6437045	·60673412	4·167	0·6198225	·65340597	1785
1790	4·397	0·6431299	·60691660	4·161	0·6192497	·65360250	1790
1795	4·391	0·6425570	·60709909	4·156	0·6186786	·65379902	1795
1800	4·385	0·6419856	·60728158	4·151	0·6181091	·65399555	1800
1805	4·379	0·6414160	·60746407	4·145	0·6175413	·65419207	1805
1810	4·374	0·6408480	·60764655	4·140	0·6169752	·65438860	1810
1815	4·368	0·6402818	·60782904	4·134	0·6164108	·65458512	1815
1820	4·362	0·6397172	·60801153	4·129	0·6158480	·65478165	1820
1825	4·357	0·6391542	·60819402	4·124	0·6152870	·65497817	1825
1830	4·351	0·6385929	·60837650	4·118	0·6147275	·65517470	1830
1835	4·345	0·6380332	·60855899	4·113	0·6141696	·65537122	1835
1840	4·340	0·6374750	·60874148	4·108	0·6136133	·65556775	1840
1845	4·334	0·6369184	·60892397	4·103	0·6130586	·65576427	1845
1850	4·329	0·6363635	·60910645	4·097	0·6125055	·65596080	1850
1855	4·323	0·6358101	·60928894	4·092	0·6119540	·65615732	1855
1860	4·318	0·6352584	·60947143	4·087	0·6114041	·65635385	1860
1865	4·312	0·6347082	·60965392	4·082	0·6108558	·65655037	1865
1870	4·307	0·6341596	·60983640	4·077	0·6103089	·65674690	1870
1875	4·301	0·6336125	·61001889	4·072	0·6097637	·65694342	1875
1880	4·296	0·6330669	·61020138	4·066	0·6092200	·65713995	1880
1885	4·291	0·6325228	·61038387	4·061	0·6086778	·65733647	1885
1890	4·285	0·6319804	·61056635	4·056	0·6081371	·65753300	1890
1895	4·280	0·6314394	·61074884	4·051	0·6075980	·65772952	1895
1900	4·275	0·6308999	·61093133	4·046	0·6070603	·65792605	1900
1905	4·269	0·6303619	·61111382	4·041	0·6065242	·65812257	1905
1910	4·264	0·6298254	·61129630	4·036	0·6059896	·65831910	1910
1915	4·259	0·6292904	·61147879	4·031	0·6054564	·65851562	1915
1920	4·254	0·6287569	·61166128	4·026	0·6049248	·65871215	1920
1925	4·248	0·6282248	·61184377	4·022	0·6043946	·65890867	1925
1930	4·243	0·6276942	·61202625	4·017	0·6038658	·65910520	1930
1935	4·238	0·6271652	·61220874	4·012	0·6033386	·65930172	1935
1940	4·233	0·6266375	·61239123	4·007	0·6028127	·65949825	1940
1945	4·228	0·6261113	·61257372	4·002	0·6022883	·65969477	1945
1950	4·223	0·6255865	·61275620	3·997	0·6017654	·65989130	1950

Sine of Inclination (1 over)	n = 015			n = 017			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1705	4 049	0 6078799	69670983	3 705	0 5688173	78960334	1705
1710	4 044	0 6067804	69691939	3 700	0 5682212	78984197	1710
1715	4 038	0 6061829	69712995	3 695	0 5676271	79008061	1715
1720	4 033	0 6055872	69734051	3 690	0 5670348	79031925	1720
1725	4 027	0 6049934	69755108	3 685	0 5664453	79055789	1725
1730	4 022	0 6044013	69776164	3 680	0 5658556	79079652	1730
1735	4 016	0 6038111	69797220	3 675	0 5652688	79103516	1735
1740	4 011	0 6032226	69818276	3 670	0 5646837	79127380	1740
1745	4 005	0 6026360	69839333	3 665	0 5641004	79151214	1745
1750	4 000	0 6020511	69860389	3 660	0 5635189	79175107	1750
1755	3 995	0 6014680	69881445	3 655	0 5629392	79198971	1755
1760	3 989	0 6008866	69902501	3 651	0 5623612	79222835	1760
1765	3 984	0 6003070	69923558	3 646	0 5617850	79246699	1765
1770	3 979	0 5997292	69944614	3 641	0 5612106	79270562	1770
1775	3 973	0 5991532	69965670	3 636	0 5606379	79294426	1775
1780	3 968	0 5985788	69986726	3 631	0 5600669	79318290	1780
1785	3 963	0 5980061	70007783	3 627	0 5594976	79342154	1785
1790	3 958	0 5974351	70028839	3 622	0 5589299	79366017	1790
1795	3 952	0 5968658	70049895	3 617	0 5583640	79389881	1795
1800	3 947	0 5962981	70070951	3 612	0 5577997	79413745	1800
1805	3 942	0 5957321	70092008	3 608	0 5572371	79437609	1805
1810	3 937	0 5951678	70113064	3 603	0 5566762	79461472	1810
1815	3 932	0 5946052	70134120	3 598	0 5561169	79485336	1815
1820	3 927	0 5940442	70155176	3 594	0 5555592	79509200	1820
1825	3 922	0 5934849	70176233	3 589	0 5550033	79533064	1825
1830	3 917	0 5929271	70197289	3 585	0 5544490	79556927	1830
1835	3 912	0 5923710	70218345	3 580	0 5538962	79580791	1835
1840	3 907	0 5918165	70239401	3 576	0 5533451	79604655	1840
1845	3 902	0 5912636	70260458	3 571	0 5527955	79628519	1845
1850	3 897	0 5907122	70281514	3 567	0 5522476	79652382	1850
1855	3 892	0 5901625	70302570	3 562	0 5517013	79676246	1855
1860	3 887	0 5896144	70323626	3 558	0 5511565	79700110	1860
1865	3 882	0 5890678	70344683	3 553	0 5506133	79723974	1865
1870	3 877	0 5885228	70365739	3 549	0 5500717	79747837	1870
1875	3 872	0 5879794	70386795	3 544	0 5495316	79771701	1875
1880	3 868	0 5874374	70407851	3 540	0 5489930	79795565	1880
1885	3 863	0 5868970	70428908	3 536	0 5484559	79819429	1885
1890	3 858	0 5863581	70449964	3 531	0 5479204	79843292	1890
1895	3 853	0 5858208	70471020	3 527	0 5473864	79867156	1895
1900	3 848	0 5852849	70492076	3 523	0 5468539	79891020	1900
1905	3 844	0 5847506	70513133	3 518	0 5463229	79914884	1905
1910	3 839	0 5842177	70534189	3 514	0 5457934	79938747	1910
1915	3 834	0 5836864	70555245	3 510	0 5452654	79962611	1915
1920	3 830	0 5831565	70576301	3 505	0 5447389	79986475	1920
1925	3 825	0 5826280	70597358	3 501	0 5442138	80010339	1925
1930	3 820	0 5821011	70618414	3 497	0 5436902	80034202	1930
1935	3 816	0 5815756	70639470	3 493	0 5431681	80058066	1935
1940	3 811	0 5810515	70660526	3 489	0 5426473	80081930	1940
1945	3 807	0 5805289	70681583	3 484	0 5421281	80105794	1945
1950	3 802	0 5800077	70702639	3 480	0 5416103	80129657	1950

Sine of Inclination (1 over)	n = ·020			n = ·0225			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1705	3·318	0·5209011	·92894510	3·074	0·4877724	1·0450633	1705
1710	3·314	0·5203097	·92922585	3·070	0·4871846	1·0453791	1710
1715	3·309	0·5197202	·92950660	3·066	0·4865986	1·0456950	1715
1720	3·305	0·5191326	·92978735	3·062	0·4860145	1·0460108	1720
1725	3·300	0·5185468	·93006810	3·058	0·4854322	1·0463266	1725
1730	3·296	0·5179628	·93034885	3·054	0·4848517	1·0466425	1730
1735	3·291	0·5173805	·93062960	3·050	0·4842730	1·0469583	1735
1740	3·287	0·5168001	·93091035	3·046	0·4836961	1·0472742	1740
1745	3·283	0·5162214	·93119110	3·042	0·4831210	1·0475900	1745
1750	3·278	0·5156446	·93147185	3·038	0·4825477	1·0479059	1750
1755	3·274	0·5150695	·93175260	3·034	0·4819760	1·0482217	1755
1760	3·270	0·5144961	·93203335	3·030	0·4814062	1·0485375	1760
1765	3·265	0·5139245	·93231410	3·026	0·4808382	1·0488534	1765
1770	3·261	0·5133547	·93259485	3·022	0·4802719	1·0491692	1770
1775	3·257	0·5127867	·93287560	3·018	0·4797073	1·0494851	1775
1780	3·253	0·5122204	·93315635	3·014	0·4791445	1·0498009	1780
1785	3·248	0·5116557	·93343710	3·010	0·4785833	1·0501168	1785
1790	3·244	0·5110927	·93371785	3·006	0·4780239	1·0504326	1790
1795	3·240	0·5105314	·93399860	3·002	0·4774661	1·0507485	1795
1800	3·236	0·5099717	·93427935	2·9[illegible]	769099	1·0510643	1800
1805	3·232	0·5094137	·93456010	2[illegible]	3554	1·0513801	1805
1810	3·227	0·5088574	·93484085	[illegible]	0026	1·0516960	1810
1815	3·223	0·5083028	·93512160	[illegible]	6	1·0520118	1815
1820	3·219	0·5077498	·93540235	[illegible]	[illegible]	[illegible]	1820
1825	[illegible]	0·5071985	·93568310	[illegible]	3	[illegible]	1825

Sine of Inclination (1 over)	n = ·0250			n = ·0275			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1705	2 880	0 4593206	1 1611814	2 720	0 4345702	1·2772995	1705
1710	2 876	0 4587859	1 1615323	2 716	0 4339886	1 2776855	1710
1715	2 872	0 4581532	1 1618833	2 713	0 4334089	1 2780716	1715
1720	2 868	0 4575723	1 1622342	2 709	0 4328310	1 2784576	1720
1725	2 864	0 4569933	1 1625851	2 706	0 4322550	1 2788436	1725
1730	2 860	0 4564160	1 1629361	2 702	0 4316807	1 2792297	1730
1735	2 857	0 4558406	1 1632870	2 698	0 4311082	1 2796157	1735
1740	2 853	0 4552669	1 1636379	2 695	0 4305376	1 2800017	1740
1745	2 849	0 4546950	1 1639889	2 691	0 4299687	1 2803878	1745
1750	2 845	0 4541249	1 1643398	2 688	0 4294016	1 2807738	1750
1755	2 842	0 4535566	1 1646908	2 684	0 4288362	1 2811598	1755
1760	2 838	0 4529900	1 1650417	2 681	0 4282727	1 2815459	1760
1765	2 834	0 4524252	1 1653926	2 677	0 4277108	1 2819319	1765
1770	2 830	0 4518622	1 1657436	2 674	0 4271508	1 2823179	1770
1775	2 827	0 4513009	1 1660945	2 670	0 4265925	1 2827040	1775
1780	2 823	0 4507413	1 1664454	2 667	0 4260359	1 2830900	1780
1785	2 820	0 4501834	1 1667964	2 664	0 4254810	1 2834760	1785
1790	2 816	0 4496272	1 1671473	2 660	0 4249278	1 2838620	1790
1795	2 812	0 4490726	1 1674983	2 657	0 4243762	1 2842481	1795
1800	2 809	0 4485196	1 1678492	2 654	0 4238262	1 2846341	1800
1805	2 805	0 4479684	1 1682001	2 650	0 4232780	1 2850201	1805
1810	2 802	0 4474188	1 1685511	2 647	0 4227314	1 2854062	1810
1815	2 798	0 4468709	1 1689020	2 644	0 4221866	1 2857922	1815
1820	2 795	0 4463247	1 1692529	2 640	0 4216433	1 2861782	1820
1825	2 791	0 4457801	1 1696039	2 637	0 4211018	1 2865643	1825
1830	2 788	0 4452372	1 1699548	2 634	0 4205618	1 2869503	1830
1835	2 784	0 4446958	1 1703058	2 630	0 4200234	1 2873363	1835
1840	2 781	0 4441560	1 1706567	2 627	0 4194865	1 2877224	1840
1845	2 777	0 4436178	1 1710076	2 624	0 4189513	1 2881084	1845
1850	2 774	0 4430812	1 1713586	2 621	0 4184177	1 2884944	1850
1855	2 770	0 4425462	1 1717095	2 617	0 4178857	1 2888805	1855
1860	2 767	0 4420128	1 1720604	2 614	0 4173553	1 2892665	1860
1865	2 764	0·4414810	1 1724114	2 611	0·4168265	1 2896526	1865
1870	2 760	0 4409507	1 1727623	2 608	0 4162991	1 2900385	1870
1875	2 757	0 4404220	1 1731133	2 605	0 4157733	1 2904246	1875
1880	2 754	0 4398947	1 1734642	2 602	0 4152491	1 2908106	1880
1885	2 750	0 4393690	1 1738151	2 599	0 4147263	1 2911966	1885
1890	2 747	0 4388448	1 1741661	2 595	0 4142052	1 2915827	1890
1895	2 744	0 4383222	1 1745170	2 592	0 4136855	1 2919687	1895
1900	2 740	0 4378010	1 1748679	2 589	0 4131674	1 2923547	1900
1905	2 737	0 4372813	1 1752189	2 586	0 4126507	1 2927408	1905
1910	2 734	0 4367632	1 1755698	2 583	0 4121355	1 2931268	1910
1915	2 731	0 4362465	1 1759208	2 580	0 4116218	1 2935128	1915
1920	2 727	0 4357313	1 1762717	2 577	0 4111096	1 2938989	1920
1925	2 724	0 4352175	1 1766226	2 574	0 4105988	1 2942849	1925
1930	2 721	0 4347052	1 1769736	2 571	0 4100894	1 2946709	1930
1935	2 718	0·4341944	1 1773245	2 568	0 4095816	1 2950570	1935
1940	2 714	0 4336850	1 1776754	2 565	0·4090752	1 2954430	1940
1945	2 711	0 4331771	1 1780264	2 562	0 4085702	1 2958290	1945
1950	2 708	0 4326706	1 1783773	2 559	0 4080667	1 2962150	1950

Sine of Inclination (1 over)	n = ·030			n = ·035			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1705	2·587	0·4128096	1·3934177	2·378	0·3762466	1·6256539	1705
1710	2·584	0·4122308	1·3938388	2·375	0·3756728	1·6261452	1710
1715	2·580	0·4116539	1·3942599	2·372	0·3751008	1·6266366	1715
1720	2·577	0·4110788	1·3946810	2·369	0·3745308	1·6271279	1720
1725	2·573	0·4105056	1·3951022	2·366	0·3739626	1·6276192	1725
1730	2·570	0·4099342	1·3955233	2·363	0·3733961	1·6281105	1730
1735	2·567	0·4093645	1·3959444	2·360	0·3728314	1·6286018	1735
1740	2·563	0·4087966	1·3963655	2·357	0·3722685	1·6290931	1740
1745	2·560	0·4082305	1·3967867	2·354	0·3717074	1·6295844	1745
1750	2·557	0·4076662	1·3972078	2·350	0·3711481	1·6300757	1750
1755	2·553	0·4071038	1·3976289	2·347	0·3705905	1·6305671	1755
1760	2·550	0·4065428	1·3980500	2·344	0·3700347	1·6310584	1760
1765	2·547	0·4059838	1·3984712	2·341	0·3694807	1·6315497	1765
1770	2·543	0·4054265	1·3988923	2·338	0·3689284	1·6320410	1770
1775	2·540	0·4048710	1·3993134	2·335	0·3683779	1·6325323	1775
1780	2·537	0·4043171	1·3997345	2·333	0·3678291	1·6330236	1780
1785	2·534	0·4037650	1·4001557	2·330	0·3672819	1·6335149	1785
1790	2·531	0·4032146	1·4005768	2·327	0·3667365	1·6340062	1790
1795	2·527	0·4026658	1·4009979	2·324	0·3661927	1·6344976	1795
1800	2·524	0·4021186	1·4014190	2·321	0·3656505	1·6349889	1800
1805	2·521	0·4015731	1·4018402	2·318	0·3651100	1·6354802	1805
1810	2·518	0·4010294	1·4022613	2·315	0·3645712	1·6359715	1810
1815	2·515	0·4004873	1·4026824	2·312	0·3640341	1·6364628	1815
1820	2·512	0·3999468	1·4031035	2·309	0·3634986	1·6369541	1820
1825	2·508	0·3994080	1·4035247	2·307	0·3629648	1·6374454	1825
1830	2·505	0·3988707	1·4039458	2·304	0·3624325	1·6379367	1830
1835	2·502	0·3983351	1·4043669	2·301	0·3619019	1·6384281	1835
1840	2·499	0·3978011	1·4047880	2·298	0·3613729	1·6389194	1840
1845	2·496	0·3972687	1·4052092	2·295	0·3608454	1·6394107	1845
1850	2·493	0·3967378	1·4056303	2·293	0·3603195	1·6399020	1850
1855	2·490	0·3962086	1·4060514	2·290	0·3597952	1·6403933	1855
1860	2·487	0·3956809	1·4064725	2·287	0·3592725	1·6408846	1860
1865	2·484	0·3951549	1·4068937	2·284	0·3587514	1·6413759	1865
1870	2·481	0·3946303	1·4073148	2·282	0·3582318	1·6418672	1870
1875	2·478	0·3941073	1·4077359	2·279	0·3577138	1·6423586	1875
1880	2·475	0·3935859	1·4081570	2·276	0·3571973	1·6428499	1880
1885	2·472	0·3930659	1·4085782	2·273	0·3566823	1·6433412	1885
1890	2·469	0·3925474	1·4089993	2·271	0·3561688	1·6438325	1890
1895	2·466	0·3920305	1·4094204	2·268	0·3556569	1·6443238	1895
1900	2·463	0·3915151	1·4098415	2·265	0·3551464	1·6448151	1900
1905	2·460	0·3910012	1·4102627	2·263	0·3546375	1·6453064	1905
1910	2·457	0·3904887	1·4106838	2·260	0·3541300	1·6457977	1910
1915	2·455	0·3899778	1·4111049	2·257	0·3536240	1·6462891	1915
1920	2·452	0·3894683	1·4115260	2·255	0·3531195	1·6467804	1920
1925	2·449	0·3889603	1·4119472	2·252	0·3526164	1·6472717	1925
1930	2·446	0·3884537	1·4123683	2·250	0·3521148	1·6477630	1930
1935	2·443	0·3879486	1·4127894	2·247	0·3516147	1·6482543	1935
1940	2·440	0·3874450	1·4132105	2·244	0·3511160	1·6487456	1940
1945	2·437	0·3869428	1·4136317	2·242	0·3506187	1·6492369	1945
1950	2·435	0·3864420	1·4140528	2·239	0·3501229	1·6497282	1950

Sine of Inclination Lower	n = 050			Sine of Inclination (Lower)	n = ·009		
	N	log N	D		N	log N	D
1705	2 002	0 3015055	2 3223628	1955	5 618	0 7495913	42454217
1710	2 000	0 3009433	2 3230646	1960	5 611	0 7490611	42446851
1715	1 997	0 3003830	2 3237665	1965	5 604	0 7485323	42459485
1720	1 994	0 2998246	2 3244684	1970	5 598	0 7479949	42472118
1725	1 992	0 2992680	2 3251703	1975	5 591	0 7474791	42484752
1730	1 989	0 2987132	2 3258721	1980	5 584	0 7469547	42497386
1735	1 987	0 2981602	2 3265740	1985	5 577	0 7464316	42510020
1740	1 984	0 2976089	2 3272759	1990	5 571	0 7459098	42522653
1745	1 982	0 2970595	2 3279778	1995	5 564	0 7453895	42535287
1750	1 979	0 2965118	2 3286796	2000	5 557	0 7448705	42547921
1755	1 977	0 2959659	2 3293815	2005	5 551	0 7443528	42560555
1760	1 974	0 2954217	2 3300834	2010	5 544	0 7438365	42573188
1765	1 972	0 2948793	2 3307853	2015	5 538	0 7433215	42585822
1770	1 969	0 2943387	2 3314871	2020	5 531	0 7428079	42598456
1775	1 967	0 2937997	2 3321890	2025	5 525	0 7422956	42611090
1780	1 965	0 2932625	2 3328909	2030	5 518	0 7417846	42623723
1785	1 962	0 2927269	2 3335928	2035	5 512	0 7412749	42636357
1790	1 960	0 2921930	2 3342946	2040	5 505	0 7407665	42648991
1795	1 957	0 2916609	2 3349965	2045	5 499	0 7402594	42661625
1800	1 955	0 2911303	2 3356984	2050	5 492	0 7397537	42674258
1805	1 953	0 2906014	2 3364003	2055	5 486	0 7392493	42686892
1810	1 950	0 2900742	2 3371021	2060	5 480	0 7387461	42699526
1815	1 948	0 2895486	2 3378040	2065	5 473	0 7382442	42712160
1820	1 945	0 2890247	2 3385059	2070	5 467	0 7377435	42724793
1825	1 943	0 2885024	2 3392078	2075	5 461	0 7372441	42737427
1830	1 941	0 2879818	2 3399096	2080	5 454	0 7367460	42750061
1835	1 938	0 2874627	2 3406115	2085	5 448	0 7362492	42762695
1840	1 936	0 2869452	2 3413134	2090	5 442	0 7357536	42775328
1845	1 934	0 2864293	2 3420153	2095	5 436	0 7352592	42787962
1850	1 932	0 2859150	2 3427171	2100	5 430	0 7347660	42800596
1855	1 929	0 2854023	2 3434190	2105	5 423	0 7342741	42813230
1860	1 927	0 2848912	2 3441209	2110	5 417	0 7337835	42825863
1865	1 925	0 2843816	2 3448228	2115	5 411	0 7332941	42838497
1870	1 923	0 2838735	2 3455246	2120	5 405	0 7328059	42851131
1875	1 920	0 2833671	2 3462265	2115	5 399	0 7323189	42863765
1880	1 918	0 2828621	2 3469284	2130	5 393	0 7318330	42876398
1885	1 916	0 2823585	2 3476303	2135	5 387	0 7313483	42889032
1890	1 914	0 2818566	2 3483321	2140	5 381	0 7308648	42901666
1895	1 911	0 2813562	2 3490340	2145	5 375	0 7303826	42914300
1900	1 909	0 2808572	2 3497359	2150	5 369	0 7299016	42926933
1905	1 907	0 2803598	2 3504378	2155	5 363	0 7294217	42939567
1910	1 905	0 2798638	2 3511396	2160	5 357	0 7289429	42952201
1915	1 903	0 2793691	2 3518415	2165	5 351	0 7284653	42964835
1920	1 901	0 2788764	2 3525434	2170	5 346	0 7279889	42977468
1925	1 898	0 2783848	2 3532453	2175	5 340	0 7275136	42990102
1930	1 896	0 2778947	2 3539471	2180	5 334	0 7270395	43002736
1935	1 894	0 2774060	2 3546490	2185	5 328	0 7265664	43015370
1940	1 892	0 2769188	2 3553509	2190	5 322	0 7260945	43028003
1945	1 890	0 2764331	2 3560528	2195	5 316	0 7256238	43040637
1950	1 888	0 2759487	2 3567546	2200	5 311	0 7251543	43053271

Sine of Inclination (1 over)	n = ·030			n = ·035			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1705	2·587	0·4128096	1·3934177	2·378	0·3762466	1·6256539	1705
1710	2·584	0·4122308	1·3938388	2·375	0·3756728	1·6261452	1710
1715	2·580	0·4116539	1·3942599	2·372	0·3751008	1·6266366	1715
1720	2·577	0·4110788	1·3946810	2·369	0·3745308	1·6271279	1720
1725	2·573	0·4105056	1·3951022	2·366	0·3739626	1·6276192	1725
1730	2·570	0·4099342	1·3955233	2·363	0·3733961	1·6281105	1730
1735	2·567	0·4093645	1·3959444	2·360	0·3728314	1·6286018	1735
1740	2·563	0·4087966	1·3963655	2·357	0·3722685	1·6290931	1740
1745	2·560	0·4082305	1·3967867	2·354	0·3717074	1·6295844	1745
1750	2·557	0·4076662	1·3972078	2·350	0·3711481	1·6300757	1750
1755	2·553	0·4071038	1·3976289	2·347	0·3705905	1·6305671	1755
1760	2·550	0·4065428	1·3980500	2·344	0·3700347	1·6310584	1760
1765	2·547	0·4059838	1·3984712	2·341	0·3694807	1·6315497	1765
1770	2·543	0·4054265	1·3988923	2·338	0·3689284	1·6320410	1770
1775	2·540	0·4048710	1·3993134	2·335	0·3683779	1·6325323	1775
1780	2·537	0·4043171	1·3997345	2·333	0·3678291	1·6330236	1780
1785	2·534	0·4037650	1·4001557	2·330	0·3672819	1·6335149	1785
1790	2·531	0·4032146	1·4005768	2·327	0·3667365	1·6340062	1790
1795	2·527	0·4026658	1·4009979	2·324	0·3661927	1·6344976	1795
1800	2·524	0·4021186	1·4014190	2·321	0·3656505	1·6349889	1800
1805	2·521	0·4015731	1·4018402	2·318	0·3651100	1·6354802	1805
1810	2·518	0·4010294	1·4022613	2·315	0·3645712	1·6359715	1810
1815	2·515	0·4004873	1·4026824	2·312	0·3640341	1·6364628	1815
1820	2·512	0·3999468	1·4031035	2·309	0·3634986	1·6369541	1820
1825	2·508	0·3994080	1·4035247	2·307	0·3629648	1·6374454	1825
1830	2·505	0·3988707	1·4039458	2·304	0·3624325	1·6379367	1830
1835	2·502	0·3983351	1·4043669	2·301	0·3619019	1·6384281	1835
1840	2·499	0·3978011	1·4047880	2·298	0·3613729	1·6389194	1840
1845	2·496	0·3972687	1·4052092	2·295	0·3608454	1·6394107	1845
1850	2·493	0·3967378	1·4056303	2·293	0·3603195	1·6399020	1850
1855	2·490	0·3962086	1·4060514	2·290	0·3597952	1·6403933	1855
1860	2·487	0·3956809	1·4064725	2·287	0·3592725	1·6408846	1860
1865	2·484	0·3951549	1·4068937	2·284	0·3587514	1·6413759	1865
1870	2·481	0·3946303	1·4073148	2·282	0·3582318	1·6418672	1870
1875	2·478	0·3941073	1·4077359	2·279	0·3577138	1·6423586	1875
1880	2·475	0·3935859	1·4081570	2·276	0·3571973	1·6428499	1880
1885	2·472	0·3930659	1·4085782	2·273	0·3566823	1·6433412	1885
1890	2·469	0·3925474	1·4089993	2·271	0·3561688	1·6438325	1890
1895	2·466	0·3920305	1·4094204	2·268	0·3556569	1·6443238	1895
1900	2·463	0·3915151	1·4098415	2·265	0·3551464	1·6448151	1900
1905	2·460	0·3910012	1·4102627	2·263	0·3546375	1·6453064	1905
1910	2·457	0·3904887	1·4106838	2·260	0·3541300	1·6457977	1910
1915	2·455	0·3899778	1·4111049	2·257	0·3536240	1·6462891	1915
1920	2·452	0·3894683	1·4115260	2·255	0·3531195	1·6467804	1920
1925	2·449	0·3889603	1·4119472	2·252	0·3526164	1·6472717	1925
1930	2·446	0·3884537	1·4123683	2·250	0·3521148	1·6477630	1930
1935	2·443	0·3879486	1·4127894	2·247	0·3516147	1·6482543	1935
1940	2·440	0·3874450	1·4132105	2·244	0·3511160	1·6487456	1940
1945	2·437	0·3869428	1·4136317	2·242	0·3506187	1·6492369	1945
1950	2·435	0·3864420	1·4140528	2·239	0·3501229	1·6497282	1950

Sine of Inclination 1 over	n = 050			Sine of Inclination 1 over	n = ·009		
	N	log N	D		N	log N	D
1705	2 002	0 3015055	2 3223628	1955	5 618	0 7495913	42434217
1710	2 000	0 3009483	2 3230646	1960	5 611	0 7490611	42446851
1715	1 997	0 3003830	2 3237665	1965	5 604	0 7485323	42459485
1720	1 994	0 2998246	2 3244684	1970	5 598	0 7479949	42472118
1725	1 992	0 2992680	2 3251703	1975	5 591	0 7474791	42484752
1730	1 989	0 2987132	2 3258721	1980	5 584	0 7469547	42497386
1735	1 987	0 2981602	2 3265740	1985	5 577	0 7464316	42510020
1740	1 984	0 2976089	2 3272759	1990	5 571	0 7459098	42522653
1745	1 982	0 2970595	2 3279778	1995	5 564	0 7453895	42535287
1750	1 979	0 2965118	2 3286796	2000	5 557	0 7448705	42547921
1755	1 977	0 2959659	2 3293815	2005	5 551	0 7443528	42560555
1760	1 974	0 2954217	2 3300834	2010	5 544	0 7438365	42573189
1765	1 972	0 2948793	2 3307853	2015	5 538	0 7433215	42585822
1770	1 969	0 2943387	2 3314871	2020	5 531	0 7428079	42598456
1775	1 967	0 2937997	2 3321890	2025	5 525	0 7422956	42611090
1780	1 965	0 2932625	2 3328909	2030	5 518	0 7417846	42623723
1785	1 962	0 2927269	2 3335928	2035	5 512	0 7412749	42636357
1790	1 960	0 2921930	2 3342946	2040	5 505	0 7407665	42648991
1795	1 957	0 2916609	2 3349965	2045	5 499	0 7402594	42661625
1800	1 955	0 2911303	2 3356984	2050	5 492	0 7397537	42674258
1805	1 953	0 2906014	2 3364003	2055	5 486	0 7392493	42686892
1810	1 950	0 2900742	2 3371021	2060	5 480	0 7387461	42699526
1815	1 948	0 2895486	2 3378040	2065	5 473	0 7382442	42712160
1820	1 945	0 2890247	2 3385059	2070	5 467	0 7377435	42724793
1825	1 943	0 2885024	2 3392078	2075	5 461	0 7372441	42737427
1830	1 941	0 2879818	2 3399096	2080	5 454	0 7367460	42750061
1835	1 938	0 2874627	2 3406115	2085	5 448	0 7362492	42762695
1840	1 936	0 2869452	2 3413134	2090	5 442	0 7357536	42775328
1845	1 934	0 2864293	2 3420153	2095	5 436	0 7352592	42787962
1850	1 932	0 2859150	2 3427171	2100	5 430	0 7347660	42800596
1855	1 929	0 2854023	2 3434190	2105	5 423	0 7342741	42813230
1860	1 927	0 2848912	2 3441209	2110	5 417	0 7337835	42825863
1865	1 925	0 2843816	2 3448228	2115	5 411	0 7332941	42838497
1870	1 923	0 2838735	2 3455246	2120	5 405	0 7328059	42851131
1875	1 920	0 2833671	2 3462265	2115	5 399	0 7323189	42863765
1880	1 918	0 2828621	2 3469284	2130	5 393	0 7318330	42876398
1885	1 916	0 2823585	2 3476303	2135	5 387	0 7313483	42889032
1890	1 914	0 2818566	2 3483321	2140	5 381	0 7308648	42901666
1895	1 911	0 2813562	2 3490340	2145	5 375	0 7303826	42914300
1900	1 909	0 2808572	2 3497359	2150	5 369	0 7299016	42926933
1905	1 907	0 2803598	2 3504378	2155	5 363	0 7294217	42939567
1910	1 905	0 2798638	2 3511396	2160	5 357	0 7289429	42952201
1915	1 903	0 2793694	2 3518415	2165	5 351	0 7284653	42964835
1920	1 901	0 2788764	2 3525434	2170	5 346	0 7279889	42977468
1925	1 898	0 2783848	2 3532453	2175	5 340	0 7275136	42990102
1930	1 896	0 2778947	2 3539471	2180	5 334	0 7270395	43002736
1935	1 894	0 2774060	2 3546490	2185	5 328	0 7265664	43015370
1940	1 892	0 2769188	2 3553509	2190	5 322	0 7260945	43028003
1945	1 890	0 2764331	2 3560528	2195	5 316	0 7256238	43040637
1950	1 888	0 2759487	2 3567546	2200	5 311	0 7251543	43053271

Sine of Inclination (1 over)	n = ·010			n = ·011			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1955	5·163	0·7128975	·47149130	4·791	0·6803835	·51864043	1955
1960	5·157	0·7123695	·47163168	4·785	0·6798576	·51879484	1960
1965	5·150	0·7118429	·47177205	4·779	0·6793330	·51894926	1965
1970	5·144	0·7113178	·47191243	4·773	0·6788099	·51910367	1970
1975	5·138	0·7107940	·47205280	4·767	0·6782883	·51925808	1975
1980	5·132	0·7102717	·47219318	4·762	0·6777681	·51941249	1980
1985	5·126	0·7097508	·47233355	4·756	0·6772492	·51956691	1985
1990	5·120	0·7092312	·47247393	4·750	0·6767316	·51972132	1990
1995	5·113	0·7087130	·47261430	4·745	0·6762155	·51987573	1995
2000	5·107	0·7081962	·47275468	4·739	0·6757008	·52003014	2000
2005	5·101	0·7076807	·47289505	4·734	0·6751873	·52018456	2005
2010	5·095	0·7071666	·47303543	4·728	0·6746753	·52033897	2010
2015	5·089	0·7066538	·47317580	4·721	0·6740648	·52049338	2015
2020	5·083	0·7061423	·47331618	4·717	0·6736552	·52064779	2020
2025	5·077	0·7056321	·47345655	4·711	0·6731471	·52080221	2025
2030	5·071	0·7051233	·47359693	4·706	0·6726403	·52095662	2030
2035	5·065	0·7046158	·47373730	4·700	0·6721349	·52111103	2035
2040	5·060	0·7041096	·47387768	4·695	0·6716308	·52126544	2040
2045	5·054	0·7036046	·47401805	4·690	0·6711279	·52141986	2045
2050	5·048	0·7031010	·47415843	4·684	0·6706263	·52157427	2050
2055	5·042	0·7025988	·47429880	4·679	0·6701262	·52172868	2055
2060	5·036	0·7020977	·47443918	4·673	0·6696273	·52188309	2060
2065	5·030	0·7015980	·47457955	4·668	0·6691296	·52203751	2065
2070	5·025	0·7010995	·47471993	4·663	0·6686331	·52219192	2070
2075	5·019	0·7006023	·47486030	4·657	0·6681379	·52234633	2075
2080	5·013	0·7001063	·47500068	4·652	0·6676440	·52250074	2080
2085	5·007	0·6996117	·47514105	4·647	0·6671514	·52265516	2085
2090	5·002	0·6991183	·47528143	4·642	0·6666600	·52280957	2090
2095	4·996	0·6986260	·47542180	4·636	0·6661699	·52296398	2095
2100	4·990	0·6981350	·47556218	4·631	0·6656809	·52311839	2100
2105	4·985	0·6976453	·47570255	4·626	0·6651932	·52327281	2105
2110	4·979	0·6971568	·47584293	4·621	0·6647069	·52342722	2110
2115	4·974	0·6966695	·47598330	4·616	0·6642217	·52358163	2115
2120	4·968	0·6961835	·47612368	4·610	0·6637377	·52373604	2120
2125	4·962	0·6956986	·47626405	4·605	0·6632549	·52389046	2125
2130	4·957	0·6952149	·47640443	4·600	0·6627733	·52404487	2130
2135	4·951	0·6947323	·47654480	4·595	0·6622928	·52419928	2135
2140	4·946	0·6942510	·47668518	4·590	0·6618136	·52435369	2140
2145	4·941	0·6937709	·47682555	4·585	0·6613356	·52450811	2145
2150	4·935	0·6932921	·47696593	4·580	0·6608587	·52466252	2150
2155	4·930	0·6928143	·47710630	4·575	0·6603830	·52481693	2155
2160	4·924	0·6923377	·47724668	4·570	0·6599085	·52497134	2160
2165	4·919	0·6918622	·47738705	4·565	0·6594351	·52512576	2165
2170	4·913	0·6913879	·47752743	4·560	0·6589628	·52528017	2170
2175	4·908	0·6909148	·47766780	4·555	0·6584917	·52543458	2175
2180	4·903	0·6904428	·47780818	4·550	0·6580218	·52558899	2180
2185	4·897	0·6899719	·47794855	4·545	0·6575530	·52574341	2185
2190	4·892	0·6895022	·47808893	4·540	0·6570853	·52589782	2190
2195	4·887	0·6890336	·47822930	4·535	0·6566188	·52605223	2195
2200	4·882	0·6885662	·47836968	3·531	0·6561535	·52620664	2200

Sine of Inclination (1 over)	n = 012			n = 013			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1955	4 480	0 6512954	56578956	4 218	0 6250630	61293869	1955
1960	4 475	0 6507715	56595801	4 213	0 6245410	61312118	1960
1965	4 469	0 6502490	56612646	4 207	0 6240204	61330367	1965
1970	4 464	0 6497278	56629491	4 202	0 6235013	61348615	1970
1975	4 459	0 6492082	56646336	4 197	0 6229835	61366864	1975
1980	4 453	0 6486900	56663181	4 192	0 6224672	61385113	1980
1985	4 448	0 6481731	56680026	4 187	0 6219523	61403362	1985
1990	4 443	0 6476576	56696871	4 183	0 6214386	61421610	1990
1995	4 438	0 6471435	56713716	4 178	0 6209264	61439859	1995
2000	4 432	0 6466307	56730561	4 173	0 6204156	61458108	2000
2005	4 427	0 6461192	56747406	4 168	0 6199060	61476357	2005
2010	4 422	0 6456092	56764251	4 163	0 6193979	61494605	2010
2015	4 417	0 6451005	56781096	4 158	0 6188911	61512854	2015
2020	4 412	0 6445931	56797941	4 153	0 6183856	61531103	2020
2025	4 406	0 6440870	56814786	4 148	0 6178814	61549352	2025
2030	4 401	0 6435822	56831631	4 144	0 6173785	61567600	2030
2035	4 396	0 6430787	56848476	4 139	0 6168770	61585849	2035
2040	4 391	0 6425766	56865321	4 134	0 6163768	61604098	2040
2045	4 386	0 6420758	56882166	4 129	0 6158778	61622347	2045
2050	4 381	0 6415762	56899011	4 125	0 6153802	61640595	2050
2055	4 376	0 6410780	56915856	4 120	0 6148839	61658844	2055
2060	4 371	0 6405810	56932701	4 115	0 6143888	61677093	2060
2065	4 366	0 6400854	56949546	4 111	0 6138950	61695342	2065
2070	4 361	0 6395909	56966391	4 106	0 6134025	61713590	2070
2075	4 356	0 6390977	56983236	4 101	0 6129112	61731839	2075
2080	4 351	0 6386059	57000081	4 097	0 6124213	61750088	2080
2085	4 346	0 6381153	57016926	4 092	0 6119326	61768337	2085
2090	4 341	0 6376259	57033771	4 087	0 6114452	61786585	2090
2095	4 336	0 6371377	57050616	4 083	0 6109589	61804834	2095
2100	4 332	0 6366507	57067461	4 078	0 6104738	61823083	2100
2105	4 327	0 6361650	57084306	4 074	0 6099900	61841332	2105
2110	4 322	0 6356806	57101151	4 069	0 6095075	61859580	2110
2115	*4 317*	*0 6351974*	*57117996*	*4 065*	*0 6090262*	*61877829*	*2115*
2120	4 312	0 6347154	57134841	4 060	0 6085462	61896078	2120
2125	4 308	0 6342346	57151686	4 056	0 6080672	61914327	2125
2130	4 303	0 6337549	57168531	4 051	0 6075895	61932575	2130
2135	4 298	0 6332764	57185376	4 047	0 6071129	61950824	2135
2140	4 293	0 6327991	57202221	4 042	0 6066375	61969073	2140
2145	4 289	0 6323231	57219066	4 038	0 6061634	61987322	2145
2150	4 284	0 6318483	57235911	4 034	0 6056905	62005570	2150
2155	4 279	0 6313746	57252756	4 029	0 6052187	62023819	2155
2160	4 275	0 6309019	57269601	4 025	0 6047480	62042068	2160
2165	4 270	0 6304306	57286446	4 020	0 6042785	62060317	2165
2170	4 265	0 6299603	57303291	4 016	0 6038101	62078565	2170
2175	4 261	0 6294912	57320136	4 012	0 6033429	62096814	2175
2180	4 256	0 6290233	57336981	4 008	0 6028769	62115063	2180
2185	4 252	0 6285565	57353826	4 003	0 6024120	62133312	2185
2190	4 247	0 6280908	57370671	3 999	0 6019482	62151560	2190
2195	4 243	0 6276263	57387516	3 995	0 6014855	62169809	2195
2200	4 238	0 6271630	57404361	3 990	0 6010241	62188058	2200

Sine of Inclination (1 over)	n = ·014			n = ·015			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1955	3·992	0·6012438	·66008782	3·797	0·5794879	·70723695	1955
1960	3·988	0·6007237	·66028435	3·793	0·5789696	·70744751	1960
1965	3·983	0·6002049	·66048087	3·788	0·5784526	·70765808	1965
1970	3·978	0·5996876	·66067740	3·784	0·5779371	·70786864	1970
1975	3·973	0·5991716	·66087392	3·779	0·5774229	·70807920	1975
1980	3·969	0·5986571	·66107045	3·775	0·5769101	·70828976	1980
1985	3·964	0·5981441	·66126697	3·770	0·5763988	·70850033	1985
1990	3·959	0·5976323	·66146350	3·766	0·5758888	·70871089	1990
1995	3·955	0·5971219	·66166002	3·762	0·5753802	·70892145	1995
2000	3·950	0·5966129	·66185655	3·757	0·5748730	·70913201	2000
2005	3·946	0·5961052	·66205307	3·753	0·5743671	·70934258	2005
2010	3·941	0·5955989	·66224960	3·749	0·5738626	·70955314	2010
2015	3·936	0·5950939	·66244612	3·744	0·5733594	·70976370	2015
2020	3·932	0·5945902	·66264265	3·740	0·5728574	·70997426	2020
2025	3·927	0·5940879	·66283917	3·736	0·5723569	·71018483	2025
2030	3·923	0·5935869	·66303570	3·731	0·5718576	·71039539	2030
2035	3·918	0·5930872	·66323222	3·727	0·5713596	·71060595	2035
2040	3·914	0·5925888	·66342875	3·723	0·5708630	·71081651	2040
2045	3·909	0·5920917	·66362527	3·718	0·5703677	·71102708	2045
2050	3·905	0·5915958	·66382180	3·714	0·5698736	·71123764	2050
2055	3·900	0·5911014	·66401832	3·710	0·5693810	·71144820	2055
2060	3·896	0·5906082	·66421485	3·706	0·5688895	·71165876	2060
2065	3·891	0·5901163	·66441137	3·702	0·5683994	·71186933	2065
2070	3·887	0·5896256	·66460790	3·698	0·5679104	·71207989	2070
2075	3·883	0·5891362	·66480442	3·693	0·5674227	·71229045	2075
2080	3·878	0·5886480	·66500095	3·689	0·5669364	·71250101	2080
2085	3·874	0·5881612	·66519747	3·685	0·5664513	·71271158	2085
2090	3·870	0·5876755	·66539400	3·681	0·5659674	·71292214	2090
2095	3·865	0·5871911	·66559052	3·677	0·5654848	·71313270	2095
2100	3·861	0·5867079	·66578705	3·673	0·5650033	·71334326	2100
2105	3·857	0·5862259	·66598357	3·669	0·5645231	·71355383	2105
2110	3·853	0·5857453	·66618010	3·665	0·5640442	·71376439	2110
2115	3·848	0·5852658	·66637662	3·661	0·5635666	·71397495	2115
2120	3·844	0·5847876	·66657315	3·657	0·5630901	·71418551	2120
2125	3·840	0·5843104	·66676967	3·653	0·5626147	·71439608	2125
2130	3·836	0·5838345	·66696620	3·649	0·5621406	·71460664	2130
2135	3·831	0·5833598	·66716272	3·645	0·5616676	·71481720	2135
2140	3·827	0·5828862	·66735925	3·641	0·5611958	·71502776	2140
2145	3·823	0·5824139	·66755577	3·637	0·5607253	·71523833	2145
2150	3·819	0·5819429	·66775230	3·633	0·5602560	·71544889	2150
2155	3·815	0·5814729	·66794882	3·629	0·5597878	·71565945	2155
2160	3·811	0·5810040	·66814535	3·625	0·5593207	·71587001	2160
2165	3·807	0·5805364	·66834187	3·621	0·5588547	·71608058	2165
2170	3·803	0·5800699	·66853840	3·617	0·5583900	·71629114	2170
2175	3·798	0·5796045	·66873492	3·613	0·5579264	·71650170	2175
2180	3·794	0·5791403	·66893145	3·610	0·5574640	·71671226	2180
2185	3·790	0·5786772	·66912797	3·606	0·5570027	·71692283	2185
2190	3·786	0·5782152	·66932450	3·602	0·5565424	·71713339	2190
2195	3·782	0·5777544	·66952102	3·598	0·5560834	·71734395	2195
2200	3·778	0·5772948	·66971755	3·594	0·5556256	·71755451	2200

Sine of Inclination (1 over)	n = 017			n = 020			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1955	3 476	0 5410939	80153521	3 115	0 4934090	94298260	1955
1960	3 472	0 5405788	80177385	3 111	0 4928985	94326335	1960
1965	3 468	0 5400652	80201249	3 107	0 4923895	94354410	1965
1970	3 464	0 5395530	80225112	3 104	0 4918820	94382485	1970
1975	3 460	0 5390422	80248976	3 100	0 4913757	94410560	1975
1980	3 456	0 5385329	80272840	3 096	0 4908710	94438635	1980
1985	3 452	0 5380249	80296704	3 093	0 4903676	94466710	1985
1990	3 448	0 5375182	80320567	3 089	0 4898655	94494785	1990
1995	3 444	0 5370130	80344431	3 086	0 4893649	94522860	1995
2000	3 440	0 5365091	80368295	3 082	0 4888656	94550935	2000
2005	3 436	0 5360065	80392159	3 079	0 4883677	94579010	2005
2010	3 432	0 5355053	80416022	3 075	0 4878711	94607085	2010
2015	3 428	0 5350055	80439886	3 072	0 4873758	94635160	2015
2020	3 424	0 5345069	80463750	3 068	0 4868818	94663235	2020
2025	3 420	0 5340097	80487614	3 065	0 4863892	94691310	2025
2030	3 416	0 5335138	80511477	3 061	0 4858979	94719385	2030
2035	3 412	0 5330192	80535341	3 058	0 4854079	94747460	2035
2040	3 408	0 5325259	80559205	3 054	0 4849192	94775535	2040
2045	3 404	0 5320339	80583069	3 051	0 4844318	94803610	2045
2050	3 401	0 5315432	80606932	3 048	0 4839457	94831685	2050
2055	3 397	0 5310539	80630796	3 044	0 4834610	94859760	2055
2060	3 393	0 5305658	80654660	3 041	0 4829775	94887835	2060
2065	3 389	0 5300790	80678524	3 037	0 4824952	94915910	2065
2070	3 385	0 5295934	80702387	3 034	0 4820142	94943985	2070
2075	3 381	0 5291091	80726251	3 031	0 4815344	94972060	2075
2080	3 378	0 5286261	80750115	3 027	0 4810560	95000135	2080
2085	3 374	0 5281443	80773979	3 024	0 4805788	95028210	2085
2090	3 370	0 5276638	80797842	3 021	0 4801029	95056285	2090
2095	3 367	0 5271845	80821706	3 017	0 4796281	95084360	2095
2100	3 363	0 5267063	80845570	3 014	0 4791546	95112435	2100
2105	3 359	0 5262295	80869434	3 011	0 4786823	95140510	2105
2110	3 355	0 5257539	80893297	3 008	0 4782113	95168585	2110
2115	3 352	0 5252796	80917161	3 004	0 4777414	95196660	2115
2120	3 348	0 5248064	80941025	3 001	0 4772730	95224735	2120
2125	3 345	0 5243345	80964889	2 998	0 4768055	95252810	2125
2130	3 341	0 5238636	80988752	2 995	0 4763393	95280885	2130
2135	3 337	0 5233939	81012616	2 991	0 4758742	95308960	2135
2140	3 334	0 5229255	81036480	2 988	0 4754103	95337035	2140
2145	3 330	0 5224583	81060344	2 985	0 4749477	95365110	2145
2150	3 327	0 5219923	81084207	2 982	0 4744863	95393185	2150
2155	3 323	0 5215275	81108071	2 979	0 4740260	95421260	2155
2160	3 319	0 5210637	81131935	2 976	0 4735668	95449335	2160
2165	3 316	0 5206011	81155799	2 972	0 4731088	95477410	2165
2170	3 312	0 5201397	81179662	2 969	0 4726519	95505485	2170
2175	3 309	0 5196794	81203526	2 966	0 4721962	95533560	2175
2180	3 305	0 5192203	81227390	2 963	0 4717417	95561635	2180
2185	3 302	0 5187623	81251254	2 960	0 4712883	95589710	2185
2190	3 298	0 5183054	81275117	2 957	0 4708359	95617785	2190
2195	3 295	0 5178497	81298981	2 954	0 4703848	95645860	2195
2200	3 292	0 5173952	81322845	2 951	0 4699348	95673935	2200

Sine of Inclination (1 over)	n = ·0225			n = ·0250			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1955	2·887	0·4604557	1·0608554	2·705	0·4321655	1·1787283	1955
1960	2·884	0·4599489	1·0611713	2·702	0·4316618	1·1790792	1960
1965	2·880	0·4594433	1·0614871	2·699	0·4311594	1·1794301	1965
1970	2·877	0·4589392	1·0618030	2·696	0·4306585	1·1797811	1970
1975	2·874	0·4584364	1·0621188	2·693	0·4301590	1·1801320	1975
1980	2·870	0·4579352	1·0624346	2·689	0·4296609	1·1804829	1980
1985	2·867	0·4574353	1·0627505	2·686	0·4291643	1·1808339	1985
1990	2·864	0·4569367	1·0630663	2·683	0·4286689	1·1811848	1990
1995	2·860	0·4564395	1·0633822	2·680	0·4281749	1·1815358	1995
2000	2·857	0·4559438	1·0636980	2·677	0·4276824	1·1818867	2000
2005	2·854	0·4554493	1·0640139	2·674	0·4271911	1·1822376	2005
2010	2·851	0·4549562	1·0643297	2·671	0·4267012	1·1825886	2010
2015	2·848	0·4544644	1·0646456	2·668	0·4262126	1·1829395	2015
2020	2·844	0·4539739	1·0649614	2·665	0·4257253	1·1832904	2020
2025	2·841	0·4534847	1·0652772	2·662	0·4252394	1·1836414	2025
2030	2·838	0·4529969	1·0655931	2·659	0·4247548	1·1839923	2030
2035	2·835	0·4525104	1·0659089	2·656	0·4242715	1·1843433	2035
2040	2·832	0·4520252	1·0662248	2·653	0·4237894	1·1846942	2040
2045	2·828	0·4515412	1·0665406	2·650	0·4233087	1·1850451	2045
2050	2·825	0·4510586	1·0668565	2·647	0·4228293	1·1853961	2050
2055	2·822	0·4505774	1·0671723	2·645	0·4223512	1·1857470	2055
2060	2·819	0·4500973	1·0674881	2·642	0·4218744	1·1860979	2060
2065	2·816	0·4496185	1·0678040	2·639	0·4213988	1·1864489	2065
2070	2·813	0·4491410	1·0681198	2·636	0·4209244	1·1867998	2070
2075	2·810	0·4486647	1·0684357	2·633	0·4204513	1·1871508	2075
2080	2·807	0·4481897	1·0687515	2·630	0·4199795	1·1875017	2080
2085	2·804	0·4477160	1·0690674	2·627	0·4195091	1·1878526	2085
2090	2·801	0·4472436	[illegible]	2·624	0·4190399	1·1882036	2090
2095	2·798	0·4467723	[illegible]	2·622	0·4185718	1·1885545	2095
2100	2·794	0·4463022	[illegible]	2·619	0·4181048	1·1889054	2100

Sine of Inclination (1 over)	n = ·0275			n = ·030			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1955	2 556	0 4075645	1 2966011	2 432	0 3859426	1 4144739	1955
1960	2 553	0 4070638	1 2969871	2 429	0 3854446	1 4148950	1960
1965	2 550	0 4065644	1 2973731	2 426	0 3849480	1 4153162	1965
1970	2 547	0 4060665	1 2977592	2 424	0 3844528	1 4157373	1970
1975	2 544	0 4055699	1 2981452	2 421	0 3839590	1 4161584	1975
1980	2 541	0 4050748	1 2985312	2 418	0 3834667	1 4165795	1980
1985	2 539	0 4045812	1 2989173	2 415	0 3829758	1 4170007	1985
1990	2 536	0 4040888	1 2993033	2 413	0 3824861	1 4174218	1990
1995	2 533	0 4035978	1 2996893	2 410	0 3819979	1 4178429	1995
2000	2 530	0 4031082	1 3000754	2 407	0 3815110	1 4182640	2000
2005	2 527	0 4026198	1 3004614	2 405	0 3810254	1 4186852	2005
2010	2 524	0 4021329	1 3008474	2 402	0 3805412	1 4191063	2010
2015	2 521	0 4016472	1 3012335	2 399	0 3800583	1 4195274	2015
2020	2 519	0 4011629	1 3016195	2 396	0 3795767	1 4199485	2020
2025	2 516	0 4006800	1 3020055	2 394	0 3790965	1 4203697	2025
2030	2 513	0 4001984	1 3023915	2 391	0 3786176	1 4207908	2030
2035	2 510	0 3997180	1 3027776	2 389	0 3781400	1 4212119	2035
2040	2 507	0 3992389	1 3031636	2 386	0 3776636	1 4216330	2040
2045	2 505	0 3987611	1 3035496	2 383	0 3771886	1 4220542	2045
2050	2 502	0 3982846	1 3039357	2 381	0 3767149	1 4224753	2050
2055	2 499	0 3978096	1 3043217	2 378	0 3762426	1 4228964	2055
2060	2 497	0 3973357	1 3047077	2 376	0 3757714	1 4233175	2060
2065	2 494	0 3968631	1 3050938	2 373	0 3753015	1 4237387	2065
2070	2 491	0 3963916	1 3054798	2 371	0 3749328	1 4241598	2070
2075	2 488	0 3959215	1 3058658	2 368	0 3743655	1 4245809	2075
2080	2 486	0 3954527	1 3062519	2 365	0 3738994	1 4250020	2080
2085	2 483	0 3949852	1 3066379	2 363	0 3734346	1 4254232	2085
2090	2 480	0 3945189	1 3070239	2 360	0 3729710	1 4258443	2090
2095	2 478	0 3940537	1 3074100	2 358	0 3725086	1 4262654	2095
2100	2 475	0 3935898	1 3077960	2 355	0 3720474	1 4266865	2100
2105	2 472	0 3931271	1 3081820	2 353	0 3715875	1 4271077	2105
2110	2 470	0 3926657	1 3085680	2 350	0 3711289	1 4275288	2110
2115	2 467	0 3922056	1 3089541	2 348	0 3706715	1 4279499	2115
2120	2 465	0 3917466	1 3093401	2 345	0 3702152	1 4283710	2120
2125	2 462	0 3912887	1 3097261	2 343	0 3697600	1 4287922	2125
2130	2 459	0 3908321	1 3101122	2 340	0 3693061	1 4292133	2130
2135	2 457	0 3903767	1 3104982	2 338	0 3688534	1 4296344	2135
2140	2 454	0 3899224	1 3108842	2 336	0 3684018	1 4300555	2140
2145	2 452	0 3894694	1 3112703	2 333	0 3679516	1 4304767	2145
2150	2 449	0 3890176	1 3116563	2 331	0 3675024	1 4308978	2150
2155	2 447	0 3885668	1 3120423	2 328	0 3670545	1 4313189	2155
2160	2 444	0 3881172	1 3124284	2 326	0 3666075	1 4317400	2160
2165	2 442	0 3876687	1 3128144	2 324	0 3661619	1 4321612	2165
2170	2 439	0 3872216	1 3132004	2 321	0 3657173	1 4325823	2170
2175	2 437	0 3867754	1 3135865	2 319	0 3652739	1 4330034	2175
2180	2 434	0 3863304	1 3139725	2 316	0 3648317	1 4334245	2180
2185	2 432	0 3858866	1 3143585	2 314	0 3643906	1 4338457	2185
2190	2 429	0 3854438	1 3147445	2 312	0 3639505	1 4342668	2190
2195	2 427	0 3850022	1 3151306	2 309	0 3635117	1 4346879	2195
2200	2 424	0 3845618	1 3155166	2 307	0 3630740	1 4351090	2200

Sine of Inclination (1 over)	n = ·0225			n = ·0250			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1955	2·887	0·4604557	1·0608554	2·705	0·4321655	1·1787283	1955
1960	2·884	0·4599489	1·0611713	2·702	0·4316618	1·1790792	1960
1965	2·880	0·4594433	1·0614871	2·699	0·4311594	1·1794301	1965
1970	2·877	0·4589392	1·0618030	2·696	0·4306585	1·1797811	1970
1975	2·874	0·4584364	1·0621188	2·693	0·4301590	1·1801320	1975
1980	2·870	0·4579352	1·0624346	2·689	0·4296609	1·1804829	1980
1985	2·867	0·4574353	1·0627505	2·686	0·4291643	1·1808339	1985
1990	2·864	0·4569367	1·0630663	2·683	0·4286689	1·1811848	1990
1995	2·860	0·4564395	1·0633822	2·680	0·4281749	1·1815358	1995
2000	2·857	0·4559438	1·0636980	2·677	0·4276824	1·1818867	2000
2005	2·854	0·4554493	1·0640139	2·674	0·4271911	1·1822376	2005
2010	2·851	0·4549562	1·0643297	2·671	0·4267012	1·1825886	2010
2015	2·848	0·4544644	1·0646456	2·668	0·4262126	1·1829395	2015
2020	2·844	0·4539739	1·0649614	2·665	0·4257253	1·1832904	2020
2025	2·841	0·4534847	1·0652772	2·662	0·4252394	1·1836414	2025
2030	2·838	0·4529969	1·0655931	2·659	0·4247548	1·1839923	2030
2035	2·835	0·4525104	1·0659089	2·656	0·4242715	1·1843433	2035
2040	2·832	0·4520252	1·0662248	2·653	0·4237894	1·1846942	2040
2045	2·828	0·4515412	1·0665406	2·650	0·4233087	1·1850451	2045
2050	2·825	0·4510586	1·0668565	2·647	0·4228293	1·1853961	2050
2055	2·822	0·4505774	1·0671723	2·645	0·4223512	1·1857470	2055
2060	2·819	0·4500973	1·0674881	2·642	0·4218744	1·1860979	2060
2065	2·816	0·4496185	1·0678040	2·639	0·4213988	1·1864489	2065
2070	2·813	0·4491410	1·0681198	2·636	0·4209244	1·1867998	2070
2075	2·810	0·4486647	1·0684357	2·633	0·4204513	1·1871508	2075
2080	2·807	0·4481897	1·0687515	2·630	0·4199795	1·1875017	2080
2085	2·804	0·4477160	1·0690674	2·627	0·4195091	1·1878526	2085
2090	2·801	0·4472436	1·0693832	2·624	0·4190399	1·1882036	2090
2095	2·798	0·4467723	1·0696991	2·622	0·4185718	1·1885545	2095
2100	2·794	0·4463022	1·0700149	2·619	0·4181048	1·1889054	2100
2105	2·791	0·4458334	1·0703307	2·616	0·4176392	1·1892564	2105
2110	2·788	0·4453659	1·0706466	2·613	0·4171749	1·1896073	2110
2115	2·785	0·4448996	1·0709624	2·610	0·4167118	1·1899583	2115
2120	2·782	0·4444345	1·0712783	2·608	0·4162499	1·1903092	2120
2125	2·780	0·4439705	1·0715941	2·605	0·4157891	1·1906601	2125
2130	2·777	0·4435078	1·0719100	2·602	0·4153295	1·1910111	2130
2135	2·774	0·4430461	1·0722258	2·599	0·4148711	1·1913620	2135
2140	2·771	0·4425857	1·0725416	2·597	0·4144139	1·1917129	2140
2145	2·768	0·4421266	1·0728575	2·594	0·4139579	1·1920639	2145
2150	2·765	0·4416686	1·0731733	2·591	0·4135032	1·1924148	2150
2155	2·762	0·4412117	1·0734892	2·589	0·4130495	1·1927658	2155
2160	2·759	0·4407561	1·0738050	2·586	0·4125969	1·1931167	2160
2165	2·756	0·4403015	1·0741209	2·583	0·4121455	1·1934676	2165
2170	2·753	0·4398481	1·0744367	2·581	0·4116953	1·1938186	2170
2175	2·750	0·4393958	1·0747526	2·578	0·4112463	1·1941695	2175
2180	2·748	0·4389448	1·0750684	2·575	0·4107984	1·1945204	2180
2185	2·745	0·4384948	1·0753842	2·572	0·4103516	1·1948714	2185
2190	2·742	0·4380459	1·0757001	2·570	0·4099059	1·1952223	2190
2195	2·739	0·4375982	1·0760159	2·567	0·4094614	1·1955733	2195
2200	2·736	0·4371517	1·0763318	2·565	0·4090181	1·1959242	2200

Sine of Inclination (1 over)	n = ·0275			n = 030			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
1955	2 556	0 4075645	1 2966011	2 432	0·3859426	1 4144739	1955
1960	2 553	0 4070638	1 2969871	2 429	0 3854446	1 4148950	1960
1965	2 550	0 4065644	1 2973731	2·426	0 3849480	1 4153162	1965
1970	2 547	0 4060665	1 2977592	2 424	0 3844528	1 4157373	1970
1975	2 544	0 4055699	1 2981452	2 421	0 3839590	1 4161584	1975
1980	2 541	0 4050748	1 2985312	2 418	0 3834667	1 4165795	1980
1985	2 539	0 4045812	1 2989173	2 415	0 3829758	1 4170007	1985
1990	2 536	0 4040888	1 2993033	2 413	0 3824861	1 4174218	1990
1995	2 533	0 4035978	1 2996893	2 410	0 3819979	1 4178429	1995
2000	2 530	0 4031082	1 3000754	2 407	0 3815110	1 4182640	2000
2005	2 527	0 4026198	1 3004614	2 405	0 3810254	1 4186852	2005
2010	2 524	0 4021329	1 3008474	2 402	0 3805412	1 4191063	2010
2015	2 521	0 4016472	1 3012335	2 399	0 3800583	1 4195274	2015
2020	2 519	0 4011629	1 3016195	2 396	0 3795767	1 4199485	2020
2025	2 516	0 4006800	1 3020055	2 394	0 3790965	1 4203697	2025
2030	2 513	0 4001984	1 3023915	2 391	0 3786176	1 4207908	2030
2035	2 510	0 3997180	1 3027776	2 389	0 3781400	1 4212119	2035
2040	2 507	0 3992389	1 3031636	2 386	0 3776636	1 4216330	2040
2045	2 505	0 3987611	1 3035496	2 383	0 3771886	1 4220542	2045
2050	2 502	0 3982846	1 3039357	2 381	0 3767149	1 4224753	2050
2055	2 499	0 3978096	1 3043217	2 378	0 3762426	1 4228964	2055
2060	2 497	0 3973357	1 3047077	2 376	0 3757714	1 4233175	2060
2065	2 494	0 3968631	1 3050938	2 373	0 3753015	1 4237387	2065
2070	2 491	0 3963916	1 3054798	2·371	0 3749328	1 4241598	2070
2075	2 488	0 3959215	1 3058658	2 368	0 3743655	1 4245809	2075
2080	2 486	0 3954527	1 3062519	2 365	0 3738994	1 4250020	2080
2085	2 483	0 3949852	1 3066379	2 363	0 3734346	1 4254232	2085
2090	2 480	0 3945189	1 3070239	2 360	0 3729710	1 4258443	2090
2095	2 478	0 3940537	1 3074100	2 358	0 3725086	1 4262654	2095
2100	2 475	0 3935898	1 3077960	2 355	0 3720474	1 4266865	2100
2105	2 472	0 3931271	1 3081820	2 353	0 3715875	1 4271077	2105
2110	2 470	0 3926657	1 3085680	2 350	0 3711289	1 4275288	2110
2115	2 467	0 3922056	1 3089541	2 348	0 3706715	1 4279499	2115
2120	2 465	0 3917466	1 3093401	2 345	0 3702152	1 4283710	2120
2125	2 462	0 3912887	1 3097261	2 343	0 3697600	1 4287922	2125
2130	2 459	0 3908321	1 3101122	2 340	0 3693061	1 4292133	2130
2135	2 457	0 3903767	1 3104982	2 338	0 3688534	1 4296344	2135
2140	2 454	0 3899224	1 3108842	2 336	0 3684018	1 4300555	2140
2145	2 452	0 3894694	1 3112703	2 333	0 3679516	1 4304767	2145
2150	2 449	0 3890176	1 3116563	2 331	0 3675024	1 4308978	2150
2155	2 447	0 3885668	1 3120423	2 328	0 3670545	1 4313189	2155
2160	2 444	0 3881172	1 3124284	2 326	0 3666075	1 4317400	2160
2165	2 442	0 3876687	1 3128144	2 324	0 3661619	1 4321612	2165
2170	2 439	0 3872216	1 3132004	2 321	0 3657173	1 4325823	2170
2175	2 437	0 3867754	1 3135865	2 319	0 3652739	1 4330034	2175
2180	2 434	0 3863304	1 3139725	2 316	0 3648317	1 4334245	2180
2185	2 432	0 3858866	1 3143585	2 314	0 3643906	1 4338457	2185
2190	2 429	0 3854438	1 3147445	2 312	0 3639507	1 4342668	2190
2195	2 427	0 3850022	1 3151306	2 309	0 3635117	1 4346879	2195
2200	2 424	0 3845618	1 3155166	2 307	0 3630740	1 4351090	2200

Sine of Inclination (1 over)	n = ·035			n = ·050			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
1955	2·237	0·3496284	1·6502196	1·886	0·2754657	2·3574565	1955
1960	2·234	0·3491354	1·6507109	1·884	0·2749842	2·3581584	1960
1965	2·232	0·3486437	1·6512022	1·881	0·2745040	2·3588603	1965
1970	2·229	0·3481534	1·6516935	1·879	0·2740252	2·3595621	1970
1975	2·227	0·3476646	1·6521848	1·877	0·2735478	2·3602640	1975
1980	2·224	0·3471772	1·6526761	1·875	0·2730719	2·3609659	1980
1985	2·222	0·3466912	1·6531674	1·873	0·2725973	2·3616678	1985
1990	2·219	0·3462065	1·6536587	1·871	0·2721240	2·3623696	1990
1995	2·217	0·3457232	1·6541501	1·869	0·2716522	2·3630715	1995
2000	2·214	0·3452412	1·6546414	1·867	0·2711817	2·3637734	2000
2005	2·212	0·3447606	1·6551327	1·865	0·2707125	2·3644753	2005
2010	2·209	0·3442814	1·6556240	1·863	0·2702447	2·3651771	2010
2015	2·207	0·3438034	1·6561153	1·861	0·2697782	2·3658790	2015
2020	2·205	0·3433267	1·6566066	1·859	0·2693129	2·3665809	2020
2025	2·202	0·3428515	1·6570979	1·857	0·2688491	2·3672828	2025
2030	2·200	0·3423775	1·6575892	1·855	0·2683865	2·3679846	2030
2035	2·197	0·3419048	1·6580806	1·853	0·2679253	2·3686865	2035
2040	2·195	0·3414334	1·6585719	1·851	0·2674653	2·3693884	2040
2045	2·193	0·3409633	1·6590632	1·849	0·2670066	2·3700903	2045
2050	2·190	0·3404945	1·6595545	1·847	0·2665492	2·3707921	2050
2055	2·188	0·3400270	1·6600458	1·845	0·2660932	2·3714940	2055
2060	2·186	0·3395608	1·6605371	1·843	0·2656384	2·3721959	2060
2065	2·183	0·3390958	1·6610284	1·842	0·2651848	2·3728978	2065
2070	2·181	0·3386320	1·6615197	1·840	0·2647325	2·3735996	2070
2075	2·179	0·3381696	1·6620111	1·838	0·2642814	2·3743015	2075
2080	2·176	0·3377085	1·6625024	1·836	0·2638316	2·3750034	2080
2085	2·174	0·3372486	1·6629937	1·834	0·2633831	2·3757053	2085
2090	2·172	0·3367899	1·6634850	1·832	0·2629358	2·3764071	2090
2095	2·169	0·3363324	1·6639763	1·830	0·2624896	2·3771090	2095
2100	2·167	0·3358761	1·6644676	1·828	0·2620447	2·3778109	2100
2105	2·165	0·3354211	1·6649589	1·826	0·2616011	2·3785128	2105
2110	2·163	0·3349673	1·6654502	1·825	0·2611587	2·3792146	2110
2115	2·160	0·3345148	1·6659416	1·823	0·2607176	2·3799165	2115
2120	2·158	0·3340634	1·6664329	1·821	0·2602776	2·3806184	2120
2125	2·156	0·3336133	1·6669242	1·819	0·2598388	2·3813203	2125
2130	2·154	0·3331642	1·6674155	1·817	0·2594011	2·3820221	2130
2135	2·151	0·3327164	1·6679068	1·815	0·2589646	2·3827240	2135
2140	2·149	0·3322697	1·6683981	1·814	0·2585293	2·3834259	2140
2145	2·147	0·3318243	1·6688894	1·812	0·2580953	2·3841278	2145
2150	2·145	0·3313801	1·6693807	1·810	0·2576624	2·3848296	2150
2155	2·143	0·3309370	1·6698721	1·808	0·2572306	2·3855315	2155
2160	2·140	0·3304950	1·6703634	1·806	0·2568000	2·3862334	2160
2165	2·138	0·3300542	1·6708547	1·805	0·2563705	2·3869353	2165
2170	2·136	0·3296145	1·6713460	1·803	0·2559422	2·3876371	2170
2175	2·134	0·3291760	1·6718373	1·801	0·2555150	2·3883390	2175
2180	2·132	0·3287387	1·6723286	1·799	0·2550889	2·3890409	2180
2185	2·130	0·3283024	1·6728199	1·797	0·2546639	2·3897428	2185
2190	2·128	0·3278673	1·6733112	1·796	0·2542401	2·3904446	2190
2195	2·125	0·3274333	1·6738026	1·794	0·2538175	2·3911465	2195
2200	2·123	0·3270005	1·6742939	1·792	0·2533960	2·3918484	2200

Sine of Inclination 1 over	n = 009			n = 010			Sine of Inclination 1 over
	N	log N	D	N	log N	D	
2205	5 305	0 7246858	43065905	4 876	0 6881000	47851005	2205
2210	5 299	0 7242184	43078538	4 871	0 6876347	47865043	2210
2215	5 294	0 7237521	43091172	4 866	0 6871705	47879080	2215
2220	5 288	0 7232869	43103806	4 861	0 6867075	47893118	2220
2225	5 282	0 7228229	43116440	4 856	0 6862456	47907155	2225
2230	5 277	0 7223600	43129073	4 850	0 6857849	47921193	2230
2235	5 271	0 7218981	43141707	4 845	0 6853252	47935230	2235
2240	5 265	0 7214373	43154341	4 840	0 6848665	47949268	2240
2245	5 260	0 7209776	43166975	4 835	0 6844089	47963305	2245
2250	5 254	0 7205189	43179608	4 830	0 6839524	47977343	2250
2255	5 249	0 7200614	43192242	4 825	0 6834970	47991380	2255
2260	5 243	0 7196049	43204876	4 820	0 6830427	48005418	2260
2265	5 238	0 7191495	43217510	4 815	0 6825894	48019455	2265
2270	5 232	0 7186952	43230143	4 810	0 6821372	48033493	2270
2275	5 227	0 7182419	43242777	4 805	0 6816860	48047530	2275
2280	5 221	0 7177895	43255411	4 800	0 6812358	48061568	2280
2285	5 216	0 7173382	43268045	4 795	0 6807867	48075605	2285
2290	5 211	0 7168880	43280678	4 790	0 6803387	48089643	2290
2295	5 205	0 7164389	43293312	4 785	0 6798917	48103680	2295
2300	5 200	0 7159908	43305946	4 780	0 6794458	48117718	2300
2305	5 195	0 7155438	43318580	4 775	0 6790009	48131755	2305
2310	5 189	0 7150976	43331213	4 770	0 6785569	48145793	2310
2315	5 184	0 7146525	43343847	4 766	0 6781140	48159830	2315
2320	5 179	0 7142085	43356481	4 761	0 6776721	48173868	2320
2325	5 173	0 7137654	43369115	4 756	0 6772311	48187905	2325
2330	5 168	0 7133233	43381748	4 751	0 6767912	48201943	2330
2335	5 163	0 7128823	43394382	4 746	0 6763523	48215980	2335
2340	5 158	0 7124422	43407016	4 741	0 6759144	48230018	2340
2345	5 152	0 7120031	43419650	4 737	0 6754774	48244055	2345
2350	5 147	0 7115652	43432283	4 732	0 6750416	48258093	2350
2355	5 142	0 7111281	43444917	4 727	0 6746066	48272130	2355
2360	5 137	0 7106919	43457551	4 723	0 6741726	48286168	2360
2365	5 132	0 7102567	43470185	4 718	0 6737396	48300205	2365
2370	5 127	0 7098225	43482818	4 713	0 6733076	48314243	2370
2375	5 121	0 7093893	43495452	4 708	0 6728765	48328280	2375
2380	5 116	0 7089572	43508086	4 704	0 6724465	48342318	2380
2385	5 111	0 7085259	43520720	4 699	0 6720174	48356355	2385
2390	5 106	0 7080955	43533353	4 694	0 6715891	48370393	2390
2395	5 101	0 7076662	43545987	4 690	0 6711619	48384430	2395
2400	5·096	0 7072378	43558621	4 685	0 6707357	48398468	2400
2405	5·091	0 7068103	43571255	4 681	0 6703103	48412505	2405
2410	5 086	0 7063837	43583888	4 676	0 6698858	48426543	2410
2415	5·081	0 7059580	43596522	4 672	0 6694623	48440580	2415
2420	5 076	0·7055333	43609156	4 667	0 6690398	48454618	2420
2425	5·071	0 7051095	43621790	4 662	0 6686181	48468655	2425
2430	5 066	0 7046866	43634423	4 658	0 6681974	48482693	2430
2435	5·061	0 7042647	43647057	4 653	0 6677776	48496730	2435
2440	5 0,6	0 7038437	43659691	4 649	0 6673587	48510768	2440
2445	5·0,2	0·703	43672325	4 645	0 6669405	48524805	2445
2450			43684958	4 640	0 6665238	48538843	2450

VALUES OF N, LOG N, AND D

Sine of Inclination (1 over)	n = ·011			n = ·012			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2205	4·526	0·6556893	·52636106	4·234	0·6267007	·57421206	2205
2210	4·521	0·6552261	·52651547	4·229	0·6262394	·57438051	2210
2215	4·516	0·6547640	·52666988	4·225	0·6257793	·57454896	2215
2220	4·511	0·6543031	·52682429	4·220	0·6253204	·57471741	2220
2225	4·507	0·6538432	·52697871	4·216	0·6248625	·57488586	2225
2230	4·502	0·6533845	·52713312	4·211	0·6244058	·57505431	2230
2235	4·497	0·6529269	·52728753	4·207	0·6239501	·57522276	2235
2240	4·492	0·6524702	·52744194	4·202	0·6234955	·57539121	2240
2245	4·488	0·6520147	·52759636	4·198	0·6230420	·57555966	2245
2250	4·483	0·6515603	·52775077	4·194	0·6225895	·57572811	2250
2255	4·478	0·6511070	·52790518	4·189	0·6221382	·57589656	2255
2260	4·474	0·6506548	·52805959	4·185	0·6216879	·57606501	2260
2265	4·469	0·6502035	·52821401	4·181	0·6212386	·57623346	2265
2270	4·464	0·6497534	·52836842	4·176	0·6207905	·57640191	2270
2275	4·460	0·6493042	·52852283	4·172	0·6203433	·57657036	2275
2280	4·455	0·6488561	·52867724	4·168	0·6198971	·57673881	2280
2285	4·451	0·6484090	·52883166	4·163	0·6194520	·57690726	2285
2290	4·446	0·6479631	·52898607	4·159	0·6190081	·57707571	2290
2295	4·441	0·6475182	·52914048	4·155	0·6185652	·57724416	2295
2300	4·437	0·6470743	·52929489	4·151	0·6181233	·57741261	2300
2305	4·432	0·6466325	·52944931	4·147	0·6176824	·57758106	2305
2310	4·428	0·6461895	·52960372	4·142	0·6172424	·57774951	2310
2315	4·423	0·6457486	·52975813	4·138	0·6168035	·57791796	2315
2320	4·419	0·6453088	·52991254	4·134	0·6163657	·57808641	2320
2325	4·414	0·6448700	·53006696	4·130	0·6159288	·57825486	2325
2330	4·410	0·6444321	·53022137	4·126	0·6154929	·57842331	2330
2335	4·406	0·6439952	·53037578	4·122	0·6150580	·57859176	2335
2340	4·401	0·6435594	·53053019	4·117	0·6146241	·57876021	2340
2345	4·397	0·6431246	·53068461	4·113	0·6141912	·57892866	2345
2350	4·392	0·6426908	·53083902	4·109	0·6137594	·57909711	2350
2355	4·388	0·6422577	·53099343	4·105	0·6133284	·57926556	2355
2360	4·384	0·6418257	·53114784	4·101	0·6128984	·57943401	2360
2365	4·379	0·6413947	·53130226	4·097	0·6124694	·57960246	2365
2370	4·375	0·6409648	·53145667	4·093	0·6120414	·57977091	2370
2375	4·371	0·6405359	·53161108	4·089	0·6116144	·57993936	2375
2380	4·366	0·6401079	·53176549	4·085	0·6111884	·58010781	2380
2385	4·362	0·6396808	·53191991	4·081	0·6107633	·58027626	2385
2390	4·358	0·6392546	·53207432	4·077	0·6103391	·58044471	2390
2395	4·353	0·6388293	·53222873	4·073	0·6099159	·58061316	2395
2400	4·349	0·6384051	·53238314	4·069	0·6094936	·58078161	2400
2405	4·345	0·6379819	·53253756	4·065	0·6090723	·58095006	2405
2410	4·341	0·6375596	·53269197	4·061	0·6086519	·58111851	2410
2415	4·336	0·6371381	·53284638	4·057	0·6082324	·58128696	2415
2420	4·332	0·6367176	·53300079	4·053	0·6078138	·58145541	2420
2425	4·328	0·6362980	·53315521	4·049	0·6073962	·58162386	2425
2430	4·324	0·6358792	·53330962	4·046	0·6069795	·58179231	2430
2435	4·320	0·6354615	·53346403	4·042	0·6065638	·58196076	2435
2440	4·316	0·6350448	·53361844	4·038	0·6061489	·58212921	2440
2445	4·312	0·6346289	·53377286	4·034	0·6057350	·58229766	2445
2450	4·307	0·6342139	·53392727	4·030	0·6053220	·58246611	2450

Sine of Inclination (1 over)	n = 013			n = 014			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2205	3 986	0 6005638	62206307	3 774	0 5768363	66991407	2205
2210	3 982	0 6001044	62224555	3 770	0 5763788	67011060	2210
2215	3 978	0 5996462	62242804	3 766	0 5759224	67030712	2215
2220	3 974	0 5991892	62261053	3 762	0 5754672	67050365	2220
2225	3 969	0 5987332	62279302	3 758	0 5750131	67070017	2225
2230	3 965	0 5982784	62297550	3 755	0 5745601	67089670	2230
2235	3 961	0 5978247	62315799	3 751	0 5741082	67109322	2235
2240	3 957	0 5973719	62334048	3 747	0 5736572	67128975	2240
2245	3 953	0 5969202	62352297	3 743	0 5732074	67148627	2245
2250	3 949	0 5964697	62370545	3 739	0 5727587	67168280	2250
2255	3 945	0 5960202	62388794	3 735	0 5723111	67187932	2255
2260	3 941	0 5955719	62407043	3 731	0 5718645	67207585	2260
2265	3 937	0 5951245	62425292	3 728	0 5714190	67227237	2265
2270	3 933	0 5946783	62443540	3 724	0 5709746	67246890	2270
2275	3 929	0 5942330	62461789	3 720	0 5705312	67266542	2275
2280	3 925	0 5937887	62480038	3 716	0 5700887	67286195	2280
2285	3 921	0 5933456	62498287	3 712	0 5696473	67305847	2285
2290	3 917	0 5929035	62516535	3 709	0 5692070	67325500	2290
2295	3 913	0 5924624	62534784	3 705	0 5687678	67345152	2295
2300	3 909	0 5920224	62553033	3 701	0 5683297	67364805	2300
2305	3 905	0 5915834	62571282	3 697	0 5678925	67384457	2305
2310	3 901	0 5911453	62589530	3 694	0 5674563	67404110	2310
2315	3 897	0 5907084	62607779	3 690	0 5670211	67423762	2315
2320	3 893	0 5902724	62626028	3 686	0 5665870	67443415	2320
2325	3 889	0 5898374	62644277	3 683	0 5661538	67463067	2325
2330	3 885	0 5894034	62662525	3 679	0 5657216	67482720	2330
2335	3 881	0 5889705	62680774	3 675	0 5652905	67502372	2335
2340	3 877	0 5885385	62699023	3 672	0 5648603	67522025	2340
2345	3 874	0 5881075	62717272	3 668	0 5644311	67541677	2345
2350	3 870	0 5876776	62735520	3 664	0 5640030	67561330	2350
2355	3 866	0 5872484	62753769	3 661	0 5635757	67580982	2355
2360	3 862	0 5868203	62772018	3 657	0 5631495	67600635	2360
2365	*3 858*	*0 5863932*	*62790267*	*3 654*	*0 5627242*	*67620287*	*2365*
2370	3 854	0 5859671	62808515	3 650	0 5622999	67639940	2370
2375	3 851	0 5855420	62826764	3 647	0 5618766	67659592	2375
2380	3 847	0 5851179	62845013	3 643	0 5614543	67679245	2380
2385	3 843	0 5846947	62863262	3 639	0 5610329	67698897	2385
2390	3 839	0 5842723	62881510	3 636	0 5606124	67718550	2390
2395	3 836	0 5838510	62899759	3 632	0 5601929	67738202	2395
2400	3 832	0 5834307	62918008	3 629	0 5597744	67757855	2400
2405	3 828	0 5830113	62936257	3 625	0 5593568	67777507	2405
2410	3 825	0 5825928	62954505	3 622	0 5589401	67797160	2410
2415	3 821	0 5821751	62972754	3 618	0 5585242	67816812	2415
2420	3 817	0 5817585	62991003	3 615	0 5581094	67836465	2420
2425	3 814	0 5813427	63009252	3 612	0 5576955	67856117	2425
2430	3 810	0 5809279	63027500	3 608	0 5572825	67875770	2430
2435	3 806	0 5805141	63045749	3 605	0 5568705	67895422	2435
2440	3 803	0 5801011	63063998	3 601	0 5564593	67915075	2440
2445	3 799	0 5796891	63082247	3 598	0 5560491	67934727	2445
2450	3 796	0 5792779	63100495	3 595	0 5556397	67954380	2450

Sine of Inclination (1 over)	n = ·015			n = ·017			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2205	3·591	0·5551689	·71776508	3·288	0·5169418	·81346709	2205
2210	3·587	0·5547131	·71797564	3·285	0·5164894	·81370572	2210
2215	3·583	0·5542584	·71818620	3·281	0·5160380	·81394436	2215
2220	3·579	0·5538050	·71839676	3·278	0·5155879	·81418300	2220
2225	3·576	0·5535526	·71860733	3·274	0·5151389	·81442164	2225
2230	3·572	0·5529013	·71881789	3·271	0·5146909	·81466027	2230
2235	3·568	0·5524511	·71902845	3·268	0·5142441	·81489891	2235
2240	3·565	0·5520020	·71923902	3·264	0·5137983	·81513755	2240
2245	3·561	0·5515539	·71944958	3·261	0·5133535	·81537619	2245
2250	3·557	0·5511070	·71966014	3·258	0·5129099	·81561482	2250
2255	3·554	0·5506611	·71987070	3·254	0·5124674	·81585346	2255
2260	3·550	0·5502163	·72008126	3·251	0·5120259	·81609210	2260
2265	3·546	0·5497725	·72029183	3·248	0·5115855	·81633074	2265
2270	3·543	0·5493299	·72050239	3·244	0·5111461	·81656937	2270
2275	3·539	0·5488882	·72071295	3·241	0·5107078	·81680801	2275
2280	3·535	0·5484475	·72092351	3·238	0·5102704	·81704665	2280
2285	3·532	0·5480079	·72113408	3·235	0·5098341	·81728529	2285
2290	3·528	0·5475694	·72134464	3·231	0·5093989	·81752392	2290
2295	3·525	0·5471319	·72155520	3·228	0·5089647	·81776256	2295
2300	3·521	0·5466955	·72176576	3·225	0·5085317	·81800120	2300
2305	3·518	0·5462601	·72197633	3·222	0·5080996	·81823984	2305
2310	3·514	0·5458256	·72218689	3·219	0·5076684	·81847847	2310
2315	3·511	0·5453922	·72239745	3·215	0·5072383	·81871711	2315
2320	3·507	0·5449598	·72260801	3·212	0·5068092	·81895575	2320
2325	3·504	0·5445284	·72281858	3·209	0·5063811	·81919439	2325
2330	3·500	0·5440980	·72302914	3·206	0·5059540	·81943302	2330
2335	3·497	0·5436686	·72323970	3·203	0·5055279	·81967166	2335
2340	3·493	0·5432402	·72345026	3·200	0·5051027	·81991030	2340
2345	3·490	0·5428127	·72366083	3·197	0·5046786	·82014894	2345
2350	3·486	0·5423864	·72387139	3·193	0·5042556	·82038757	2350
2355	3·483	0·5419609	·72408195	3·190	0·5038334	·82062621	2355
2360	3·480	0·5415363	·72429251	3·187	0·5034122	·82086485	2360
2365	3·476	0·5411128	·72450308	3·184	0·5029920	·82110349	2365
2370	3·473	0·5406903	·72471364	3·181	0·5025728	·82134212	2370
2375	3·470	0·5402687	·72492420	3·178	0·5021545	·82158076	2375
2380	3·466	0·5398482	·72513476	3·175	0·5017373	·82181940	2380
2385	3·463	0·5394285	·72534533	3·172	0·5013209	·82205804	2385
2390	3·459	0·5390098	·72555589	3·169	0·5009055	·82229667	2390
2395	3·456	0·5385920	·72576645	3·166	0·5004910	·82253531	2395
2400	3·453	0·5381752	·72597701	3·163	0·5000776	·82277395	2400
2405	3·450	0·5377594	·72618758	3·160	0·4996650	·82301259	2405
2410	3·446	0·5373445	·72639814	3·157	0·4992533	·82325122	2410
2415	3·443	0·5369304	·72660870	3·154	0·4988426	·82348986	2415
2420	3·440	0·5365173	·72681926	3·151	0·4984328	·82372850	2420
2425	3·436	0·5361051	·72702983	3·148	0·4980239	·82396714	2425
2430	3·433	0·5356938	·72724039	3·145	0·4976159	·82420577	2430
2435	3·430	0·5352835	·72745095	3·142	0·4972090	·82444441	2435
2440	3·427	0·5348742	·72766151	3·139	0·4968029	·82468305	2440
2445	3·423	0·5344657	·72787208	3·136	0·4963977	·82492169	2445
2450	3·420	0·5340581	·72808264	3·133	0·4959934	·82516032	2450

Sine of Inclination (1 over)	n = 020			n = 0225			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2205	2 948	0 4694860	95702010	2 733	0 4367063	1 0766476	2205
2210	2 945	0 4690382	95730085	2 731	0 4362619	1 0769635	2210
2215	2 942	0 4685914	95758160	2 728	0 4358186	1 0772793	2215
2220	2 939	0 4681458	95786235	2 725	0 4353765	1 0775951	2220
2225	2 936	0 4677013	95814310	2 722	0 4349354	1 0779110	2225
2230	2 933	0 4672579	95842385	2 720	0 4344955	1 0782268	2230
2235	2 930	0 4668156	95870460	2 717	0 4340567	1 0785427	2235
2240	2 927	0 4663744	95898535	2 714	0 4336189	1 0788585	2240
2245	2 924	0 4659342	95926610	2 711	0 4331821	1 0791744	2245
2250	2 921	0 4654951	95954685	2 709	0 4327464	1 0794902	2250
2255	2 918	0 4650571	95982760	2 706	0 4323119	1 0798061	2255
2260	2 915	0 4646202	96010835	2 703	0 4318784	1 0801219	2260
2265	2 912	0 4641843	96038910	2 701	0 4314460	1 0804377	2265
2270	2 909	0 4637495	96066985	2 698	0 4310147	1 0807536	2270
2275	2 906	0 4633157	96095060	2 695	0 4305843	1 0810694	2275
2280	2 903	0 4628829	96123135	2 692	0 4301549	1 0813853	2280
2285	2 900	0 4624511	96151210	2 690	0 4297266	1 0817011	2285
2290	2 897	0 4620205	96179285	2 687	0 4292994	1 0820170	2290
2295	2 895	0 4615908	96207360	2 685	0 4288732	1 0823328	2295
2300	2 892	0 4611623	96235435	2 682	0 4284481	1 0826486	2300
2305	2 889	0 4607348	96263510	2 679	0 4280240	1 0829645	2305
2310	2 886	0 4603081	96291585	2 677	0 4276008	1 0832803	2310
2315	2 883	0 4598826	96319660	2 674	0 4271787	1 0835962	2315
2320	2 880	0 4594580	96347735	2 672	0 4267576	1 0839120	2320
2325	2 878	0 4590344	96375810	2 669	0 4263375	1 0842279	2325
2330	2 875	0 4586119	96403885	2 666	0 4259183	1 0845437	2330
2335	2 872	0 4581903	96431960	2 664	0 4255002	1 0848596	2335
2340	2 869	0 4577698	96460035	2 661	0 4250830	1 0851754	2340
2345	2 866	0 4573502	96488110	2 659	0 4246669	1 0854912	2345
2350	2 864	0 4569317	96516185	2 656	0 4242518	1 0858071	2350
2355	2 861	0 4565140	96544260	2 654	0 4238376	1 0861229	2355
2360	2 858	0 4560973	96572335	2 651	0 4234243	1 0864388	2360
2365	2 855	0 4556816	96600410	2 649	0 4230121	1 0867546	2365
2370	2 853	0 4552669	96628485	2 646	0 4226008	1 0870705	2370
2375	2 850	0 4548532	96656560	2 644	0 4221905	1 0873863	2375
2380	2 847	0 4544405	96684635	2 641	0 4217812	1 0877021	2380
2385	2 845	0 4540287	96712710	2 639	0 4213728	1 0880180	2385
2390	2 842	0 4536178	96740785	2 636	0 4209653	1 0883338	2390
2395	2 839	0 4532079	96768860	2 634	0 4205588	1 0886497	2395
2400	2 837	0 4527989	96796935	2 631	0 4201533	1 0889655	2400
2405	2 834	0 4523909	96825010	2 629	0 4197487	1 0892814	2405
2410	2 831	0 4519837	96853085	2 626	0 4193450	1 0895972	2410
2415	2 829	0 4515775	96881160	2 624	0 4189422	1 0899131	2415
2420	2 826	0 4511722	96909235	2 621	0 4185404	1 0902289	2420
2425	2 823	0 4507679	96937310	2 619	0 4181394	1 0905447	2425
2430	2 821	0 4503645	96965385	2 617	0 4177394	1 0908606	2430
2435	2 818	0 4499620	96993460	2 614	0 4173404	1 0911764	2435
2440	2 816	0 4495604	97021535	2 612	0 4169422	1 0914923	2440
2445	2 813	0 4491597	97049610	2 609	0 4165450	1 0918081	2445
2450	2 810	0 4487599	97077685	2 607	0 4161486	1 0921240	2450

Sine of Inclination (1 over)	n = ·015			n = ·017			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2205	3·591	0·5551689	·71776508	3·288	0·5169418	·81346709	2205
2210	3·587	0·5547131	·71797564	3·285	0·5164894	·81370572	2210
2215	3·583	0·5542584	·71818620	3·281	0·5160380	·81394436	2215
2220	3·579	0·5538050	·71839676	3·278	0·5155879	·81418300	2220
2225	3·576	0·5535526	·71860733	3·274	0·5151389	·81442164	2225
2230	3·572	0·5529013	·71881789	3·271	0·5146909	·81466027	2230
2235	3·568	0·5524511	·71902845	3·268	0·5142441	·81489891	2235
2240	3·565	0·5520020	·71923902	3·264	0·5137983	·81513755	2240
2245	3·561	0·5515539	·71944958	3·261	0·5133535	·81537619	2245
2250	3·557	0·5511070	·71966014	3·258	0·5129099	·81561482	2250
2255	3·554	0·5506611	·71987070	3·254	0·5124674	·81585346	2255
2260	3·550	0·5502163	·72008126	3·251	0·5120259	·81609210	2260
2265	3·546	0·5497725	·72029183	3·248	0·5115855	·81633074	2265
2270	3·543	0·5493299	·72050239	3·244	0·5111461	·81656937	2270
2275	3·539	0·5488882	·72071295	3·241	0·5107078	·81680801	2275
2280	3·535	0·5484475	·72092351	3·238	0·5102704	·81704665	2280
2285	3·532	0·5480079	·72113408	3·235	0·5098341	·81728529	2285
2290	3·528	0·5475694	·72134464	3·231	0·5093989	·81752392	2290
2295	3·525	0·5471319	·72155520	3·228	0·5089647	·81776256	2295
2300	3·521	0·5466955	·72176576	3·225	0·5085317	·81800120	2300
2305	3·518	0·5462601	·72197633	3·222	0·5080996	·81823984	2305
2310	3·514	0·5458256	·72218689	3·219	0·5076684	·81847847	2310
2315	3·511	0·5453922	·72239745	3·215	0·5072383	·81871711	2315
2320	3·507	0·5449598	·72260801	3·212	0·5068092	·81895575	2320
2325	3·504	0·5445284	·72281858	3·209	0·5063811	·81919439	2325
2330	3·500	0·5440980	·72302914	3·206	0·5059540	·81943302	2330
2335	3·497	0·5436686	·72323970	3·203	0·5055279	·81967166	2335
2340	3·493	0·5432402	·72345026	3·200	0·5051027	·81991030	2340
2345	3·490	0·5428127	·72366083	3·197	0·5046786	·82014894	2345
2350	3·486	0·5423864	·72387139	3·193	0·5042556	·82038757	2350
2355	3·483	0·5419609	·72408195	3·190	0·5038334	·82062621	2355
2360	3·480	0·5415363	·72429251	3·187	0·5034122	·82086485	2360
2365	3·476	0·5411128	·72450308	3·184	0·5029920	·82110349	2365
2370	3·473	0·5406903	·72471364	3·181	0·5025728	·82134212	2370
2375	3·470	0·5402687	·72492420	3·178	0·5021545	·82158076	2375
2380	3·466	0·5398482	·72513476	3·175	0·5017373	·82181940	2380
2385	3·463	0·5394285	·72534533	3·172	0·5013209	·82205804	2385
2390	3·459	0·5390098	·72555589	3·169	0·5009055	·82229667	2390
2395	3·456	0·5385920	·72576645	3·166	0·5004910	·82253531	2395
2400	3·453	0·5381752	·72597701	3·163	0·5000776	·82277395	2400
2405	3·450	0·5377594	·72618758	3·160	0·4996650	·82301259	2405
2410	3·446	0·5373445	·72639814	3·157	0·4992533	·82325122	2410
2415	3·443	0·5369304	·72660870	3·154	0·4988426	·82348986	2415
2420	3·440	0·5365173	·72681926	3·151	0·4984328	·82372850	2420
2425	3·436	0·5361051	·72702983	3·148	0·4980239	·82396714	2425
2430	3·433	0·5356938	·72724039	3·145	0·4976159	·82420577	2430
2435	3·430	0·5352835	·72745095	3·142	0·4972090	·82444441	2435
2440	3·427	0·5348742	·72766151	3·139	0·4968029	·82468305	2440
2445	3·423	0·5344657	·72787208	3·136	0·4963977	·82492169	2445
2450	3·420	0·5340581	·72808264	3·133	0·4959934	·82516032	2450

Sine of Inclination (1 over)	n = 020			n = 0225			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2205	2 948	0 4694860	95702010	2 733	0 4367063	1 0766476	2205
2210	2 945	0 4690382	95730085	2 731	0 4362619	1 0769635	2210
2215	2 942	0 4685914	95758160	2 728	0 4358186	1 0772793	2215
2220	2 939	0 4681458	95786235	2 725	0 4353765	1 0775951	2220
2225	2 936	0 4677013	95814310	2 722	0 4349354	1 0779110	2225
2230	2 933	0 4672579	95842385	2 720	0 4344955	1 0782268	2230
2235	2 930	0 4668156	95870460	2 717	0 4340567	1 0785427	2235
2240	2 927	0 4663744	95898535	2 714	0 4336189	1 0788585	2240
2245	2 924	0 4659342	95926610	2 711	0 4331821	1 0791744	2245
2250	2 921	0 4654951	95954685	2 709	0 4327464	1 0794902	2250
2255	2 918	0 4650571	95982760	2 706	0 4323119	1 0798061	2255
2260	2 915	0 4646202	96010835	2 703	0 4318784	1 0801219	2260
2265	2 912	0 4641843	96038910	2 701	0 4314460	1 0804377	2265
2270	2 909	0 4637495	96066985	2 698	0 4310147	1 0807536	2270
2275	2 906	0 4633157	96095060	2 695	0 4305843	1 0810694	2275
2280	2 903	0 4628829	96123135	2 692	0 4301549	1 0813853	2280
2285	2 900	0 4624511	96151210	2 690	0 4297266	1 0817011	2285
2290	2 897	0 4620205	96179285	2 687	0 4292994	1 0820170	2290
2295	2 895	0 4615908	96207360	2 685	0 4288732	1 0823328	2295
2300	2 892	0 4611623	96235435	2 682	0 4284481	1 0826486	2300
2305	2 889	0 4607348	96263510	2 679	0 4280240	1 0829645	2305
2310	2 886	0 4603081	96291585	2 677	0 4276008	1 0832803	2310
2315	2 883	0 4598826	96319660	2 674	0 4271787	1 0835962	2315
2320	2 880	0 4594580	96347735	2 672	0 4267576	1 0839120	2320
2325	2 878	0 4590344	96375810	2 669	0 4263375	1 0842279	2325
2330	2 875	0 4586119	96403885	2 666	0 4259183	1 0845437	2330
2335	2 872	0 4581903	96431960	2 664	0 4255002	1 0848596	2335
2340	2 869	0 4577698	96460035	2 661	0 4250830	1 0851754	2340
2345	2 866	0 4573502	96488110	2 659	0 4246669	1 0854912	2345
2350	2 864	0 4569317	96516185	2 656	0 4242518	1 0858071	2350
2355	2 861	0 4565140	96544260	2 654	0 4238376	1 0861229	2355
2360	2 858	0 4560973	96572335	2 651	0 4234243	1 0864388	2360
2365	2 855	0 4556816	96600410	2 649	0 4230121	1 0867546	2365
2370	2 853	0 4552669	96628485	2 646	0 4226008	1 0870705	2370
2375	2 850	0 4548532	96656560	2 644	0 4221905	1 0873863	2375
2380	2 847	0 4544405	96684635	2 641	0 4217812	1 0877021	2380
2385	2 845	0 4540287	96712710	2 639	0 4213728	1 0880180	2385
2390	2 842	0 4536178	96740785	2 636	0 4209653	1 0883338	2390
2395	2 839	0 4532079	96768860	2 634	0 4205588	1 0886497	2395
2400	2 837	0 4527989	96796935	2 631	0 4201533	1 0889655	2400
2405	2 834	0 4523909	96825010	2 629	0 4197487	1 0892814	2405
2410	2 831	0 4519837	96853085	2 626	0 4193450	1 0895972	2410
2415	2 829	0 4515775	96881160	2 624	0 4189422	1 0899131	2415
2420	2 826	0 4511722	96909235	2 621	0 4185404	1 0902289	2420
2425	2 823	0 4507679	96937310	2 619	0 4181394	1 0905447	2425
2430	2 821	0 4503645	96965385	2 617	0 4177394	1 0908606	2430
2435	2 818	0 4499620	96993460	2 614	0 4173404	1 0911764	2435
2440	2 816	0 4495604	97021535	2 612	0 4169422	1 0914923	2440
2445	2 813	0 4491597	97049610	2 609	0 4165450	1 0918081	2445
2450	2 810	0 4487599	97077685	2 607	0 4161486	1 0921240	2450

Sine of Inclination (1 over)	n = ·0250			n = ·0275			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2205	2·562	0·4085759	1·1962751	2·422	0·3841225	1·3159026	2205
2210	2·559	0·4081346	1·1966261	2·419	0·3836842	1·3162887	2210
2215	2·557	0·4076945	1·1969770	2·417	0·3832470	1·3166747	2215
2220	2·554	0·4072556	1·1973279	2·414	0·3828110	1·3170607	2220
2225	2·552	0·4068177	1·1976789	2·412	0·3823761	1·3174468	2225
2230	2·549	0·4063809	1·1980298	2·410	0·3819423	1·3178328	2230
2235	2·547	0·4059453	1·1983808	2·407	0·3815096	1·3182188	2235
2240	2·544	0·4055106	1·1987317	2·405	0·3810778	1·3186049	2240
2245	2·541	0·4050771	1·1990826	2·402	0·3806472	1·3189909	2245
2250	2·539	0·4046446	1·1994336	2·400	0·3802176	1·3193769	2250
2255	2·536	0·4042132	1·1997845	2·398	0·3797892	1·3197630	2255
2260	2·534	0·4037829	1·2001354	2·395	0·3793618	1·3201490	2260
2265	2·531	0·4033536	1·2004864	2·393	0·3789355	1·3205350	2265
2270	2·529	0·4029254	1·2008373	2·391	0·3785102	1·3209210	2270
2275	2·526	0·4024982	1·2011883	2·388	0·3780859	1·3213071	2275
2280	2·524	0·4020720	1·2015392	2·386	0·3776627	1·3216931	2280
2285	2·521	0·4016469	1·2018901	2·384	0·3772404	1·3220791	2285
2290	2·519	0·4012229	1·2022411	2·381	0·3768193	1·3224652	2290
2295	2·517	0·4007998	1·2025920	2·379	0·3763992	1·3228512	2295
2300	2·514	0·4003779	1·2029429	2·377	0·3759802	1·3232372	2300
2305	2·512	0·3999570	1·2032939	2·374	0·3755622	1·3236233	2305
2310	2·509	0·3995369	1·2036448	2·372	0·3751451	1·3240093	2310
2315	2·507	0·3991179	1·2039958	2·370	0·3747291	1·3243953	2315
2320	2·504	0·3987000	1·2043467	2·368	0·3743140	1·3247814	2320
2325	2·502	0·3982830	1·2046976	2·365	0·3739000	1·3251674	2325
2330	2·500	0·3978670	1·2050486	2·363	0·3734869	1·3255534	2330
2335	2·497	0·3974521	1·2053995	2·361	0·3730749	1·3259395	2335
2340	2·495	0·3970381	1·2057504	2·359	0·3726638	1·3263255	2340
2345	2·492	0·3966251	1·2061014	2·356	0·3722537	1·3267115	2345
2350	2·490	0·3962132	1·2064523	2·354	0·3718448	1·3270975	2350
2355	2·488	0·3958021	1·2068033	2·352	0·3714366	1·3274836	2355
2360	2·485	0·3953921	1·2071542	2·350	0·3710294	1·3278696	2360
2365	2·483	0·3949829	1·2075051	2·348	0·3706232	1·3282556	2365
2370	2·481	0·3945748	1·2078561	2·345	0·3702180	1·3286417	2370
2375	2·478	0·3941677	1·2082070	2·343	0·3698138	1·3290277	2375
2380	2·476	0·3937616	1·2085579	2·341	0·3694105	1·3294137	2380
2385	2·474	0·3933563	1·2089089	2·339	0·3690082	1·3297998	2385
2390	2·471	0·3929520	1·2092598	2·337	0·3686068	1·3301858	2390
2395	2·469	0·3925486	1·2096108	2·335	0·3682064	1·3305718	2395
2400	2·467	0·3921462	1·2099617	2·332	0·3678069	1·3309579	2400
2405	2·465	0·3917448	1·2103126	2·330	0·3674083	1·3313439	2405
2410	2·462	0·3913443	1·2106636	2·328	0·3670107	1·3317299	2410
2415	2·460	0·3909446	1·2110145	2·326	0·3666139	1·3321160	2415
2420	2·458	0·3905459	1·2113654	2·324	0·3662182	1·3325020	2420
2425	2·456	0·3901481	1·2117164	2·322	0·3658233	1·3328880	2425
2430	2·453	0·3897512	1·2120673	2·320	0·3654294	1·3332740	2430
2435	2·451	0·3893553	1·2124183	2·318	0·3650363	1·3336601	2435
2440	2·449	0·3889603	1·2127692	2·315	0·3646442	1·3340461	2440
2445	2·447	0·3885662	1·2131201	2·313	0·3642530	1·3344321	2445
2450	2·444	0·3881730	1·2134711	2·311	0·3638627	1·3348182	2450

Sine of Inclination 1 over)	n = 030			n = ·035			Sine of Inclination 1 over)
	N	log N	D	N	log N	D	
2205	2 305	0 3626374	1 4355302	2 121	0 3265688	1 6747852	2205
2210	2 303	0 3622018	1 4359518	2 119	0 3261881	1 6752765	2210
2215	2 300	0 3617674	1 4363724	2 117	0 3257085	1 6757678	2215
2220	2 298	0 3613341	1 4367935	2 115	0 3252801	1 6762591	2220
2225	2 296	0 3609019	1 4372147	2 113	0 3248528	1 6767504	2225
2230	2 293	0 3604708	1 4376358	2 111	0 3244265	1 6772417	2230
2235	2 291	0 3600408	1 4380569	2 109	0 3240014	1 6777331	2235
2240	2 289	0 3596117	1 4384780	2 107	0 3235778	1 6782244	2240
2245	2 287	0 3591838	1 4388992	2 105	0 3231542	1 6787157	2245
2250	2 284	0 3587570	1 4393203	2 102	0 3227322	1 6792070	2250
2255	2 282	0 3583313	1 4397414	2 100	0 3223118	1 6796983	2255
2260	2 280	0 3579066	1 4401625	2 098	0 3218916	1 6801896	2260
2265	2 278	0 3574830	1 4405837	2 096	0 3214728	1 6806809	2265
2270	2 275	0 3570604	1 4410048	2 094	0 3210551	1 6811722	2270
2275	2 273	0 3566388	1 4414259	2 092	0 3206384	1 6816636	2275
2280	2 271	0 3562183	1 4418470	2 090	0 3202227	1 6821549	2280
2285	2 269	0 3557988	1 4422682	2 088	0 3198080	1 6826462	2285
2290	2 267	0 3553801	1 4426893	2 086	0 3193945	1 6831375	2290
2295	2 264	0 3549630	1 4431104	2 084	0 3189820	1 6836288	2295
2300	2 262	0 3545467	1 4435315	2 082	0 3185705	1 6841201	2300
2305	2 260	0 3541314	1 4439527	2 080	0 3181600	1 6846114	2305
2310	2 258	0 3537169	1 4443738	2 079	0 3177505	1 6851027	2310
2315	2 256	0 3533036	1 4447949	2 077	0 3173420	1 6855941	2315
2320	2 254	0 3528912	1 4452160	2 075	0 3169345	1 6860854	2320
2325	2 252	0 3524799	1 4456372	2 073	0 3165280	1 6865767	2325
2330	2 250	0 3520695	1 4460583	2 071	0 3161225	1 6870680	2330
2335	2 247	0 3516602	1 4464794	2 069	0 3157180	1 6875593	2335
2340	2 245	0 3512518	1 4469005	2 067	0 3153205	1 6880506	2340
2345	2 243	0 3508445	1 4473217	2 065	0 3149119	1 6885419	2345
2350	2 241	0 3504382	1 4477428	2 063	0 3145104	1 6890332	2350
2355	2 239	0 3500327	1 4481639	2 061	0 3141098	1 6895246	2355
2360	2 237	0 3496282	1 4485850	2 059	0 3137102	1 6900159	2360
2365	*2 235*	*0 3492247*	*1 4490062*	2 057	*0 3133115*	1 6905072	2365
2370	2 233	0 3488223	1 4494273	2 055	0 3129138	1 6909985	2370
2375	2 231	0 3484207	1 4498484	2 054	0 3125172	1 6914898	2375
2380	2 229	0 3480202	1 4502695	2 052	0 3121215	1 6919811	2380
2385	2 226	0 3476206	1 4506907	2 050	0 3117267	1 6924724	2385
2390	2 224	0 3472218	1 4511118	2 048	0 3113328	1 6929637	2390
2395	2 222	0 3468241	1 4515329	2 046	0 3109399	1 6934551	2395
2400	2 220	0 3464273	1 4519540	2 044	0 3105480	1 6939464	2400
2405	2 218	0 3460315	1 4523752	2 042	0 3101569	1 6944377	2405
2410	2 216	0 3456365	1 4527963	2 041	0 3097668	1 6949290	2410
2415	2 214	0 3452424	1 4532174	2 039	0 3093775	1 6954203	2415
2420	2 212	0 3448494	1 4536385	2 037	0 3089893	1 6959116	2420
2425	2 210	0 3444572	1 4540597	2 035	0 3086019	1 6964029	2425
2430	2 208	0 3440659	1 4544808	2 033	0 3082154	1 6968942	2430
2435	2 206	0 3436756	1 4549019	2 032	0 3078299	1 6973856	2435
2440	2 204	0 3432861	1 4553230	2 030	0 3074454	1 6978769	2440
2445	2 202	0 3428976	1 4557442	2 028	0 3070617	1 6983682	2445
2450	2 200	0 3425100	1 4561653	2 026	0 3066789	1 6988595	2450

Sine of Inclination (1 over)	n = ·050			Sine of Inclination (1 over)	n = ·009		
	N	log. N	D		N	log. N	D
2205	1·791	0·2529756	2·3925503	2455	5·042	0·7025861	·43697592
2210	1·789	0·2525562	2·3932521	2460	5·037	0·7021687	·43710226
2215	1·787	0·2521379	2·3939540	2465	5·032	0·7017522	·43722860
2220	1·785	0·2517208	2·3946559	2470	5·027	0·7013366	·43735493
2225	1·784	0·2513047	2·3953578	2475	5·023	0·7009219	·43748127
2230	1·782	0·2508898	2·3960596	2480	5·018	0·7005080	·43760761
2235	1·780	0·2504759	2·3967615	2485	5·013	0·7000950	·43773395
2240	1·779	0·2500631	2·3974634	2490	5·008	0·6996829	·43786028
2245	1·777	0·2496513	2·3981653	2495	5·044	0·6992717	·43798662
2250	1·775	0·2492406	2·3988671	2500	4·999	0·6988614	·43811296
2255	1·773	0·2488310	2·3995690	2505	4·994	0·6984519	·43823930
2260	1·772	0·2484225	2·4002709	2510	4·989	0·6980433	·43836563
2265	1·770	0·2480150	2·4009728	2515	4·985	0·6976356	·43849197
2270	1·769	0·2476086	2·4016746	2520	4·980	0·6972287	·43861831
2275	1·767	0·2472031	2·4023765	2525	4·975	0·6968227	·43874465
2280	1·765	0·2467986	2·4030784	2530	4·971	0·6964175	·43887098
2285	1·764	0·2463952	2·4037803	2535	4·966	0·6960132	·43899732
2290	1·762	0·2459929	2·4044821	2540	4·962	0·6956097	·43912366
2295	1·760	0·2455916	2·4051840	2545	4·957	0·6952071	·43925000
2300	1·759	0·2451914	2·4058859	2550	4·952	0·6948053	·43937633
2305	1·757	0·2447922	2·4065878	2555	4·948	0·6944042	·43950267
2310	1·755	0·2443938	2·4072896	2560	4·943	0·6940041	·43962901
2315	1·754	0·2439966	2·4479915	2565	4·939	0·6936047	·43975535
2320	1·752	0·2436003	2·4486934	2570	4·934	0·6932062	·43988168
2325	1·751	0·2432051	2·4093953	2575	4·930	0·6928084	·44000802
2330	1·749	0·2428108	2·4100971	2580	4·925	0·6924116	·44013436
2335	1·748	0·2424175	2·4107990	2585	4·921	0·6920155	·44026070
2340	1·746	0·2420252	2·4115009	2590	4·916	0·6916203	·44038703
2345	1·744	0·2416338	2·4122028	2595	4·912	0·6912259	·44051337
2350	1·743	0·2412436	2·4129046	2600	4·907	0·6908323	·44063971
2355	1·741	0·2408542	2·4136065	2605	4·903	0·6904395	·44076605
2360	1·740	0·2404657	2·4143084	2610	4·898	0·6900474	·44089238
2365	1·738	0·2400783	2·4150103	2615	4·894	0·6896562	·44101872
2370	1·737	0·2396918	2·4157121	2620	4·890	0·6892658	·44114506
2375	1·735	0·2393063	2·4164140	2625	4·885	0·6888761	·44127140
2380	1·733	0·2389218	2·4171159	2630	4·881	0·6884873	·44139773
2385	1·732	0·2385382	2·4178178	2635	4·876	0·6880992	·44152407
2390	1·730	0·2381554	2·4185196	2640	4·872	0·6877120	·44165041
2395	1·729	0·2377736	2·4192215	2645	4·868	0·6873254	·44177675
2400	1·727	0·2373929	2·4199234	2650	4·863	0·6869397	·44190308
2405	1·726	0·2370130	2·4206253	2655	4·859	0·6865547	·44202942
2410	1·724	0·2366341	2·4213271	2660	4·855	0·6861704	·44215576
2415	1·723	0·2362560	2·4220290	2665	4·851	0·6857869	·44228210
2420	1·721	0·2358789	2·4227309	2670	4·846	0·6854043	·44240843
2425	1·720	0·2355027	2·4234328	2675	4·842	0·6850225	·44253477
2430	1·718	0·2351274	2·4241346	2680	4·838	0·6846413	·44266111
2435	1·717	0·2347530	2·4248365	2685	4·833	0·6842609	·44278745
2440	1·715	0·2343796	2·4255384	2690	4·829	0·6838812	·44291378
2445	1·714	0·2340070	2·4262403	2695	4·825	0·6835023	·44304012
2450	1·713	0·2336353	2·4269421	2700	4·821	0·6831241	·44316646

Sine of Inclination (1 over	n = ·010			n = ·011		
	N	log N	D	N	log N	
2455	4 636	0 6661076	48552850	4 303	0 6337998	
2460	4 631	0 6656928	48568918	4 299	0 6333866	
2465	4 627	0 6652780	48586055	4 295	0 6329743	
2470	4 622	0 6648645	48604933	4 291	0 6325628	
2475	4 618	0 6644519	48609030	4 287	0 6321523	5
2480	4 614	0 6640402	48623065	4 283	0 6317426	53
2485	4 609	0 6636293	48637105	4 279	0 6313338	53
2490	4 605	0 6632193	48651143	4 275	0 6309259	535
2495	4 601	0 6628103	48665180	4 271	0 6305168	53
2500	4 596	0 6624021	48679218	4 267	0 6301127	53
2505	4 592	0 6619948	48693255	4 263	0 6297074	53
2510	4 588	0 6615883	48707293	4 259	0 6293030	53
2515	4 583	0 6611827	48721330	4 255	0 6288995	535
2520	4 579	0 6607779	48735368	4 251	0 6284967	5360
2525	4 575	0 6603740	48749405	4 247	0 6280949	53624
2530	4 571	0 6599710	48763443	4 243	0 6276939	53688
2535	4 566	0 6595688	48777480	4 239	0 6272937	5375
2540	4 562	0 6591674	48791518	4 235	0 6268944	5376
2545	4 558	0 6587669	48805555	4 232	0 6264959	53760
2550	4 554	0 6583672	48819593	4 228	0 6260983	53701
2555	4 550	0 6579683	48833630	4 224	0 6257014	5377699
2560	4 547	0 6575704	48847668	4 220	0 6253055	53772
2565	4 541	0 6571732	48861705	4 216	0 6249103	5377
2570	4 537	0 6567768	48875743	4 212	0 6245159	5376381
2575	4 533	0 6563812	48889780	4 208	0 6241224	53778
2580	4 529	0 6559865	48903818	4 205	0 6237297	5379419
2585	4 525	0 6555925	48917855	4 201	0 6233380	53800
2590	4 521	0 6551994	48931893	4 197	0 6229469	538250
2595	4 517	0 6548071	48945930	4 193	0 6225566	5384052
2600	4 512	0 6544156	48959968	4 190	0 6221672	5385496
2605	4 508	0 6540249	48974005	4 186	0 6217785	5387140
2610	4 504	0 6536350	48988043	4 182	0 6213906	5388584
2615	4 500	0 6532459	49002080	4 178	0 6210036	5390228
2620	4 496	0 6528576	49016118	4 175	0 6206173	5391772
2625	4 492	0 6524701	49030155	4 171	0 6202318	5393317
2630	4 488	0 6520834	49044193	4 167	0 6198471	5394861
2635	4 484	0 6516975	49058230	4 164	0 6194633	5396505
2640	4 480	0 6513124	49072268	4 160	0 6190802	5397949
2645	4 476	0 6509279	49086305	4 156	0 6186978	5399493
2650	4 472	0 6505443	49100343	4 153	0 6183162	5401037
2655	4 468	0 6501614	49114380	4 149	0 6179354	5402581
2660	4 465	0 6497793	49128418	4 145	0 6175553	5404125
2665	4 461	0 6493980	49142455	4 142	0 6171759	5405670
2670	4 457	0 6490174	49156493	4 138	0 6167974	5407214
2675	4 453	0 6486377	49170530	4 134	0 6164196	5408758
2680	4 449	0 6482587	49184568	4 131	0 6160425	5410302
2685	4 445	0 6478804	49198605	4 127	0 6156662	5411846
2690	4 441	0 6475029	49212643	4 124	0 6152911	5413390
2695	4 437	0 6471260	49226680	4 120	0 6149164	5414934
2700	4 434	0 6467500	49240718	4 117	0 6145424	5416479

Sine of Inclination (1 over)	n = ·050			Sine of Inclination (1 over)	n = ·009		
	N	log. N	D		N	log. N	D
2205	1·791	0·2529756	2·3925503	2455	5·042	0·7025861	·43697592
2210	1·789	0·2525562	2·3932521	2460	5·037	0·7021687	·43710226
2215	1·787	0·2521379	2·3939540	2465	5·032	0·7017522	·43722860
2220	1·785	0·2517208	2·3946559	2470	5·027	0·7013366	·43735493
2225	1·784	0·2513047	2·3953578	2475	5·023	0·7009219	·43748127
2230	1·782	0·2508898	2·3960596	2480	5·018	0·7005080	·43760761
2235	1·780	0·2504759	2·3967615	2485	5·013	0·7000950	·43773395
2240	1·779	0·2500631	2·3974634	2490	5·008	0·6996829	·43786028
2245	1·777	0·2496513	2·3981653	2495	5·044	0·6992717	·43798662
2250	1·775	0·2492406	2·3988671	2500	4·999	0·6988614	·43811296
2255	1·773	0·2488310	2·3995690	2505	4·994	0·6984519	·43823930
2260	1·772	0·2484225	2·4002709	2510	4·989	0·6980433	·43836563
2265	1·770	0·2480150	2·4009728	2515	4·985	0·6976356	·43849197
2270	1·769	0·2476086	2·4016746	2520	4·980	0·6972287	·43861831
2275	1·767	0·2472031	2·4023765	2525	4·975	0·6968227	·43874465
2280	1·765	0·2467986	2·4030784	2530	4·971	0·6964175	·43887098
2285	1·764	0·2463952	2·4037803	2535	4·966	0·6960132	·43899732
2290	1·762	0·2459929	2·4044821	2540	4·962	0·6956097	·43912366
2295	1·760	0·2455916	2·4051840	2545	4·957	0·6952071	·43925000
2300	1·759	0·2451914	2·4058859	2550	4·952	0·6948053	·43937633
2305	1·757	0·2447922	2·4065878	2555	4·948	0·6944042	·43950267
2310	1·755	0·2443938	2·4072896	2560	4·943	0·6940041	·43962901
2315	1·754	0·2439966	2·4479915	2565	4·939	0·6936047	·43975535
2320	1·752	0·2436003	2·4486934	2570	4·934	0·6932062	·43988168
2325	1·751	0·2432051	2·4093953	2575	4·930	0·6928084	·44000802
2330	1·749	0·2428108	2·4100971	2580	4·925	0·6924116	·44013436
2335	1·748	0·2424175	2·4107990	2585	4·921	0·6920155	·44026070
2340	1·746	0·2420252	2·4115009	2590	4·916	0·6916203	·44038703
2345	1·744	0·2416338	2·4122028	2595	4·912	0·6912259	·44051337
2350	1·743	0·2412436	2·4129046	2600	4·907	0·6908323	·44063971
2355	1·741	0·2408542	2·4136065	2605	4·903	0·6904395	·44076605
2360	1·740	0·2404657	2·4143084	2610	4·898	0·6900474	·44089238
2365	1·738	0·2400783	2·4150103	2615	4·894	0·6896562	·44101872
2370	1·737	0·2396918	2·4157121	2620	4·890	0·6892658	·44114506
2375	1·735	0·2393063	2·4164140	2625	4·885	0·6888761	·44127140
2380	1·733	0·2389218	2·4171159	2630	4·881	0·6884873	·44139773
2385	1·732	0·2385382	2·4178178	2635	4·876	0·6880992	·44152407
2390	1·730	0·2381554	2·4185196	2640	4·872	0·6877120	·44165041
2395	1·729	0·2377736	2·4192215	2645	4·868	0·6873254	·44177675
2400	1·727	0·2373929	2·4199234	2650	4·863	0·6869397	·44190308
2405	1·726	0·2370130	2·4206253	2655	4·859	0·6865547	·44202942
2410	1·724	0·2366341	2·4213271	2660	4·855	0·6861704	·44215576
2415	1·723	0·2362560	2·4220290	2665	4·851	0·6857869	·44228210
2420	1·721	0·2358789	2·4227309	2670	4·846	0·6854043	·44240843
2425	1·720	0·2355027	2·4234328	2675	4·842	0·6850225	·44253477
2430	1·718	0·2351274	2·4241346	2680	4·838	0·6846413	·44266111
2435	1·717	0·2347530	2·4248365	2685	4·833	0·6842609	·44278745
2440	1·715	0·2343796	2·4255384	2690	4·829	0·6838812	·44291378
2445	1·714	0·2340070	2·4262403	2695	4·825	0·6835023	·44304012
2450	1·713	0·2336353	2·4269421	2700	4·821	0·6831241	·44316646

Sine of Inclination (1 over)	n = 014			n = 015			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2455	3 591	0 5552818	67974032	3 417	0 5336514	72829320	2455
2460	3 588	0 5548238	67993685	3 414	0 5332456	72850376	2460
2465	3 584	0 5544171	68013337	3 411	0 5328407	72871433	2465
2470	3 581	0 5540114	68032990	3 408	0 5324367	72892489	2470
2475	3 578	0 5536066	68052642	3 404	0 5320336	72913545	2475
2480	3 574	0 5532026	68072295	3 401	0 5316313	72934601	2480
2485	3 571	0 5527994	68091947	3 398	0 5312299	72955658	2485
2490	3 568	0 5523971	68111600	3 395	0 5308294	72976714	2490
2495	3 564	0 5519957	68131252	3 392	0 5304298	72997770	2495
2500	3 561	0 5515953	68150905	3 389	0 5300311	73018826	2500
2505	3 558	0 5511956	68170557	3 386	0 5296431	73039883	2505
2510	3 555	0 5507969	68190210	3 382	0 5292361	73060939	2510
2515	3 551	0 5503990	68209862	3 379	0 5288400	73081995	2515
2520	3 548	0 5500020	68229515	3 376	0 5284447	73103051	2520
2525	3 545	0 5496058	68249167	3 373	0 5280503	73124108	2525
2530	3 542	0 5492104	68268820	3 370	0 5276566	73145164	2530
2535	3 538	0 5488159	68288472	3 367	0 5272639	73166220	2535
2540	3 535	0 5484222	68308125	3 364	0 5268719	73187276	2540
2545	3 532	0 5480294	68327777	3 361	0 5264809	73208333	2545
2550	3 529	0 5476374	68347430	3 358	0 5260906	73229389	2550
2555	3 526	0 5472462	68367082	3 355	0 5257012	73250445	2555
2560	3 523	0 5468559	68386735	3 352	0 5253126	73271501	2560
2565	3 519	0 5464664	68406387	3 349	0 5249249	73292558	2565
2570	3 516	0 5460778	68426040	3 346	0 5245379	73313614	2570
2575	3 513	0 5456899	68445692	3 343	0 5241518	73334670	2575
2580	3 510	0 5453029	68465345	3 340	0 5237665	73355726	2580
2585	3 507	0 5449167	68484997	3 337	0 5233820	73376783	2585
2590	3 504	0 5445312	68504650	3 334	0 5229984	73397839	2590
2595	3 501	0 5441466	68524302	3 331	0 5226155	73418895	2595
2600	3 498	0 5437628	68543955	3 328	0 5222334	73439951	2600
2605	3 494	0 5433798	68563607	3 325	0 5218522	73461008	2605
2610	3 491	0 5429975	68583260	3 323	0 5214717	73482064	2610
2615	3 488	0 5426161	68602912	3 320	0 5210920	73503120	2615
2620	3 485	0 5422355	68622565	3 317	0 5207131	73524176	2620
2625	3 482	0 5418557	68642217	3 314	0 5203350	73545233	2625
2630	3 479	0 5414767	68661870	3 311	0 5199576	73566289	2630
2635	3 476	0 5410984	68681522	3 308	0 5195811	73587345	2635
2640	3 473	0 5407210	68701175	3 305	0 5192054	73608401	2640
2645	3 470	0 5403442	68720827	3 302	0 5188304	73629458	2645
2650	3 467	0 5399683	68740480	3 300	0 5184562	73650514	2650
2655	3 464	0 5395931	68760132	3 297	0 5180827	73671570	2655
2660	3 461	0 5392186	68779785	3 294	0 5177100	73692626	2660
2665	3 458	0 5388450	68799437	3 291	0 5173381	73713683	2665
2670	3 455	0 5384721	68819090	3 288	0 5169670	73734739	2670
2675	3 452	0 5381001	68838742	3 285	0 5165967	73755795	2675
2680	3 449	0 5377287	68858395	3 283	0 5162271	73776851	2680
2685	3 446	0 5373582	68878047	3 280	0 5158582	73797908	2685
2690	3 443	0 5369883	68897700	3 277	0 5154901	73818964	2690
2695	3 440	0 5366191	68917352	3 274	0 5151227	73840020	2695
2700	3 438	0 5362507	68937005	3 272	0 5147560	73861076	2700

Sine of Inclination (1 over)	n = ·017			n = ·020			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2455	3·130	0·4955900	·82539896	2·808	0·4483611	·97105760	2455
2460	3·127	0·4951876	·82563760	2·805	0·4479631	·97133835	2460
2465	3·125	0·4947860	·82587624	2·803	0·4475660	·97161910	2465
2470	3·122	0·4943853	·82611487	2·800	0·4471698	·97189985	2470
2475	3·119	0·4939855	·82635351	2·798	0·4467745	·97218060	2475
2480	3·116	0·4935865	·82659215	2·795	0·4463800	·97246135	2480
2485	3·113	0·4931883	·82683079	2·792	0·4459865	·97274210	2485
2490	3·110	0·1927911	·82706912	2·790	0·4455938	·97302285	2490
2495	3·107	0·4923948	·82730806	2·787	0·4452019	·97330360	2495
2500	3·105	0·4919994	·82754670	2·785	0·4448110	·97358435	2500
2505	3·102	0·4916047	·82778534	2·782	0·4444209	·97386510	2505
2510	3·099	0·4912110	·82802397	2·780	0·4440316	·97414585	2510
2515	3·096	0·4908182	·82826261	2·777	0·4436433	·97442660	2515
2520	3·093	0·4901261	·82850125	2·775	0·4432558	·97470735	2520
2525	3·091	0·4900350	·82873989	2·772	0·4428692	·97498810	2525
2530	3·088	0·4896446	·82897852	2·770	0·4424833	·97526885	2530
2535	3·085	0·4892552	·82921716	2·768	0·4420980	·97554960	2535
2540	3·082	0·4888665	·82945580	2·765	0·4417142	·97583035	2540
2545	3·079	0·4884787	·82969444	2·763	0·4413309	·97611110	2545
2550	3·077	0·4880918	·83993307	2·760	0·4409485	·97639185	2550
2555	3·074	0·4877057	·83017171	2·758	0·4405669	·97667260	2555
2560	3·071	0·4873204	·83041035	2·755	0·4401861	·97695335	2560
2565	3·069	0·4869360	·83064899	2·753	0·4398061	·97723410	2565
2570	3·066	0·4865523	·83088762	2·751	0·4394269	·97751485	2570
2575	3·063	0·4861694	·83112626	2·748	0·4390485	·97779560	2575
2580	3·060	0·4857874	·83136490	2·746	0·4386711	·97807635	2580
2585	3·058	0·4854062	·83160354	2·743	0·4382944	·97835710	2585
2590	3·055	0·4850258	·83184217	2·741	0·4379185	·97863785	2590
2595	3·052	0·4846462	·83208081	2·739	0·4375434	·97891860	2595
2600	3·050	0·4842674	·83231945	2·736	0·4371690	·97919935	2600
2605	3·047	0·4838894	·83255809	2·734	0·4367955	·97948010	2605
2610	3·044	0·4835122	·83279672	2·732	0·4364229	·97976085	2610
2615	3·042	0·4831358	·83303536	2·729	0·4360510	·98004160	2615
2620	3·039	0·4827602	·83327400	2·727	0·4356798	·98032235	2620
2625	3·037	0·4823854	·83351264	2·725	0·4353095	·98060310	2625
2630	3·034	0·4820114	·83375127	2·722	0·4349400	·98088385	2630
2635	3·031	0·4816381	·83398991	2·720	0·4345713	·98116460	2635
2640	3·029	0·4812657	·83422855	2·718	0·4342033	·98144535	2640
2645	3·027	0·4808940	·83446719	2·715	0·4338361	·98172610	2645
2650	3·024	0·4805230	·83470582	2·713	0·4334696	·98200685	2650
2655	3·021	0·4801528	·83494446	2·711	0·4331038	·98228760	2655
2660	3·018	0·4797835	·83518310	2·709	0·4327389	·98256835	2660
2665	3·016	0·4794148	·83542174	2·706	0·4323747	·98284910	2665
2670	3·013	0·4790470	·83566037	2·704	0·4320114	·98312985	2670
2675	3·011	0·4786799	·83589901	2·702	0·4316488	·98341060	2675
2680	3·008	0·4783135	·83613765	2·700	0·4312869	·98369135	2680
2685	3·006	0·4779479	·83637629	2·697	0·4309258	·98397210	2685
2690	3·003	0·4775831	·83661492	2·695	0·4305654	·98425285	2690
2695	3·001	0·4772190	·83685356	2·693	0·4302057	·98453360	2695
2700	2·998	0·4768556	·83709220	2·691	0·4298468	·98481435	2700

Sine of Inclination 1 over	n = 0225			n = 0250			Sine of Inclination 1 over)
	N	log N	D	N	log N	D	
2455	2 605	0 4157532	1 0924398	2 442	0 3877807	1 2138220	2455
2460	2 602	0 4153586	1 0927556	2 440	0 3873891	1 2141729	2460
2465	2 600	0 4149649	1 0930715	2 438	0 3869988	1 2145239	2465
2470	2 598	0 4145722	1 0933873	2 436	0 3866091	1 2148748	2470
2475	2 595	0 4141803	1 0937032	2 433	0 3862204	1 2152258	2475
2480	2 593	0 4137892	1 0940190	2 431	0 3858325	1 2155767	2480
2485	2 591	0 4133990	1 0943349	2 429	0 3854454	1 2159276	2485
2490	2 588	0 4130097	1 0946507	2 427	0 3850593	1 2162786	2490
2495	2 586	0 4126213	1 0949666	2 425	0 3846740	1 2166295	2495
2500	2 584	0 4122338	1 0952824	2 423	0 3842896	1 2169804	2500
2505	2 581	0 4118471	1 0955982	2 421	0 3839061	1 2173314	2505
2510	2 579	0 4114613	1 0959141	2 418	0 3835234	1 2176823	2510
2515	2 577	0 4110763	1 0962300	2 416	0 3831416	1 2180333	2515
2520	2 574	0 4106922	1 0965458	2 414	0 3827606	1 2183842	2520
2525	2 572	0 4103090	1 0968616	2 412	0 3823805	1 2187351	2525
2530	2 570	0 4099266	1 0971775	2 410	0 3820012	1 2190861	2530
2535	2 568	0 4095450	1 0974933	2 408	0 3816228	1 2194370	2535
2540	2 565	0 4091643	1 0978091	2 406	0 3812452	1 2197879	2540
2545	2 563	0 4087845	1 0981260	2 404	0 3808684	1 2201389	2545
2550	2 561	0 4084054	1 0984408	2 402	0 3804925	1 2204898	2550
2555	2 559	0 4080271	1 0987567	2 399	0 3801174	1 2208408	2555
2560	2 557	0 4076496	1 0990725	2 397	0 3797432	1 2211917	2560
2565	2 554	0 4072732	1 0993883	2 395	0 3793697	1 2215426	2565
2570	2 552	0 4068974	1 0997042	2 393	0 3789970	1 2218936	2570
2575	2 550	0 4065224	1 1000200	2 391	0 3786252	1 2222445	2575
2580	2 548	0 4061483	1 1003359	2 389	0 3782542	1 2225954	2580
2585	2 546	0 4057750	1 1006517	2 387	0 3778840	1 2229464	2585
2590	2 543	0 4054025	1 1009676	2 385	0 3775147	1 2232973	2590
2595	2 541	0 4050308	1 1012834	2 383	0 3771461	1 2236483	2595
2600	2 539	0 4046599	1 1015993	2 381	0 3767783	1 2239992	2600
2605	2 537	0 4042898	1 1019151	2 379	0 3764113	1 2243501	2605
2610	2 535	0 4039205	1 1022310	2 377	0 3760451	1 2247011	2610
2615	2 533	0 4035520	1 1025468	2 375	0 3756797	1 2250520	2615
2620	2 530	0 4031842	1 1028626	2 373	0 3753151	1 2254029	2620
2625	2 528	0 4028173	1 1031785	2 371	0 3749513	1 2257539	2625
2630	2 526	0 4024512	1 1034943	2 369	0 3745883	1 2261048	2630
2635	2 524	0 4020858	1 1038102	2 367	0 3742261	1 2264558	2635
2640	2 522	0 4017213	1 1041260	2 365	0 3738646	1 2268067	2640
2645	2 520	0 4013574	1 1044419	2 363	0 3735039	1 2271576	2645
2650	2 518	0 4009944	1 1047577	2 361	0 3731440	1 2275086	2650
2655	2 516	0 4006320	1 1050736	2 359	0 3727847	1 2278595	2655
2660	2 513	0 4002704	1 1053894	2 357	0 3724263	1 2282104	2660
2665	2 511	0 3999096	1 1057052	2 355	0 3720686	1 2285614	2665
2670	2 509	0 3995497	1 1060211	2 353	0 3717117	1 2289123	2670
2675	2 507	0 3991905	1 1063369	2 352	0 3713557	1 2292633	2675
2680	2 505	0 3988320	1 1066528	2 350	0 3710003	1 2296142	2680
2685	2 503	0 3984743	1 1069686	2 348	0 3706457	1 2299651	2685
2690	2 501	0 3981173	1 1072845	2 346	0 3702918	1 2303161	2690
2695	2 499	0 3977610	1 1076003	2 344	0 3699386	1 2306670	2695
2700	2 497	0 3974055	1 1079161	2 342	0 3695862	1 2310179	2700

Sine of Inclination (1 over)	n = ·0275			n = ·030			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2455	2·309	0·3634733	1·3352042	2·198	0·3421233	1·4565864	2455
2460	2·307	0·3630848	1·3355902	2·197	0·3417374	1·4570075	2460
2465	2·305	0·3626972	1·3359763	2·195	0·3413525	1·4574287	2465
2470	2·303	0·3623104	1·3363623	2·193	0·3409684	1·4578498	2470
2475	2·301	0·3619246	1·3367483	2·191	0·3405853	1·4582709	2475
2480	2·299	0·3615396	1·3371344	2·189	0·3402030	1·4586920	2480
2485	2·297	0·3611554	1·3375204	2·187	0·3398215	1·4591132	2485
2490	2·295	0·3607722	1·3379064	2·185	0·3394409	1·4595343	2490
2495	2·293	0·3603898	1·3382925	2·183	0·3390612	1·4599554	2495
2500	2·291	0·3600083	1·3386785	2·181	0·3386824	1·4603765	2500
2505	2·289	0·3596279	1·3390646	2·179	0·3383044	1·4607977	2505
2510	2·287	0·3592478	1·3394505	2·177	0·3379273	1·4612188	2510
2515	2·285	0·3588689	1·3398366	2·175	0·3375511	1·4616399	2515
2520	2·283	0·3584908	1·3402266	2·174	0·3371756	1·4620610	2520
2525	2·281	0·3581136	1·3406086	2·172	0·3368011	1·4624822	2525
2530	2·279	0·3577372	1·3409947	2·170	0·3364273	1·4629033	2530
2535	2·277	0·3573617	1·3413807	2·168	0·3360545	1·4633244	2535
2540	2·275	0·3569870	1·3417667	2·166	0·3356824	1·4637455	2540
2545	2·273	0·3566131	1·3421528	2·164	0·3353113	1·4641667	2545
2550	2·271	0·3562401	1·3425388	2·162	0·3349409	1·4645878	2550
2555	2·269	0·3558678	1·3429248	2·161	0·3345714	1·4650089	2555
2560	2·267	0·3554965	1·3433109	2·159	0·3342027	1·4654300	2560
2565	2·265	0·3551259	1·3436969	2·157	0·3338348	1·4658512	2565
2570	2·263	0·3547562	1·3440829	2·155	0·3334677	1·4662723	2570
2575	2·261	0·3543873	1·3444690	2·153	0·3331014	1·4666934	2575
2580	2·260	0·3540192	1·3448550	2·151	0·3327360	1·4671145	2580
2585	2·258	0·3536519	1·3452410	2·150	0·3323714	1·4675357	2585
2590	2·256	0·3532854	1·3456270	2·148	0·3320075	1·4679568	2590
2595	2·254	0·3529197	1·3460131	2·146	0·3316445	1·4683779	2595
2600	2·252	0·3525547	1·3463991	2·144	0·3312823	1·4687990	2600
2605	2·250	0·3521907	1·3467851	2·143	0·3309208	1·4692212	2605
2610	2·248	0·3518273	1·3471712	2·141	0·3305602	1·4696413	2610
2615	2·246	0·3514648	1·3475572	2·139	0·3302003	1·4700624	2615
2620	2·244	0·3511031	1·3479432	2·137	0·3298412	1·4704835	2620
2625	2·243	0·3507421	1·3483293	2·135	0·3294830	1·4709047	2625
2630	2·241	0·3503820	1·3487153	2·134	0·3291255	1·4713258	2630
2635	2·239	0·3500226	1·3491013	2·132	0·3287688	1·4717469	2635
2640	2·237	0·3496640	1·3494874	2·130	0·3284129	1·4721680	2640
2645	2·235	0·3493062	1·3498734	2·128	0·3280577	1·4725892	2645
2650	2·233	0·3489492	1·3502594	2·127	0·3277033	1·4730103	2650
2655	2·231	0·3485928	1·3506455	2·125	0·3273496	1·4734314	2655
2660	2·230	0·3482372	1·3510315	2·123	0·3269966	1·4738525	2660
2665	2·228	0·3478824	1·3514175	2·122	0·3266445	1·4742737	2665
2670	2·226	0·3475284	1·3518035	2·120	0·3262933	1·4746948	2670
2675	2·224	0·3471752	1·3521896	2·118	0·3259427	1·4751159	2675
2680	2·222	0·3468227	1·3525756	2·116	0·3255928	1·4755370	2680
2685	2·221	0·3464710	1·3529616	2·115	0·3252437	1·4759582	2685
2690	2·219	0·3461200	1·3533477	2·113	0·3248953	1·4763793	2690
2695	2·217	0·3457696	1·3537337	2·111	0·3245477	1·4768004	2695
2700	2·215	0·3454201	1·3541197	2·110	0·3242008	1·4772215	2700

Sine of Inclination (1 over)	n = ·035			n = 050			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2455	2 024	0 3062969	1 6993508	1 711	0 2332645	2 4276440	2455
2460	2 023	0 3059159	1 6998421	1 710	0 2328946	2 4283459	2460
2465	2 021	0 3055358	1 7003334	1 708	0 2325256	2 4290478	2465
2470	2 019	0 3051565	1 7008247	1 707	0 2321575	2 4297496	2470
2475	2 017	0 3047782	1 7013161	1 705	0 2317903	2 4304515	2475
2480	2 016	0 3044007	1 7018074	1 704	0 2314238	2 4311534	2480
2485	2 014	0 3040240	1 7022987	1 702	0 2310583	2 4318553	2485
2490	2 012	0 3036482	1 7027900	1 701	0 2306936	2 4325571	2490
2495	2 010	0 3032733	1 7032813	1 700	0 2303298	2 4332590	2495
2500	2 009	0 3028993	1 7037726	1 698	0 2299670	2 4339609	2500
2505	2 007	0 3025261	1 7042639	1 697	0 2296049	2 4346628	2505
2510	2 005	0 3021538	1 7047552	1 695	0 2292436	2 4353646	2510
2515	2 003	0 3017824	1 7052466	1 694	0 2288833	2 4360665	2515
2520	2 002	0 3014117	1 7057379	1 692	0 2285237	2 4367684	2520
2525	2 000	0 3010420	1 7062292	1 691	0 2281651	2 4374703	2525
2530	1 998	0 3006731	1 7067205	1 690	0 2278072	2 4381721	2530
2535	1 997	0 3003050	1 7072118	1 689	0 2274503	2 4388740	2535
2540	1 995	0 2999377	1 7077031	1 687	0 2270941	2 4395759	2540
2545	1 993	0 2995713	1 7081944	1 686	0 2267388	2 4402778	2545
2550	1 992	0 2992058	1 7086857	1 684	0 2263843	2 4409796	2550
2555	1 990	0 2988410	1 7091771	1 683	0 2260306	2 4416815	2555
2560	1 988	0 2984771	1 7096684	1 681	0 2256777	2 4423834	2560
2565	1 987	0 2981140	1 7101597	1 680	0 2253256	2 4430853	2565
2570	1 985	0 2977517	1 7106510	1 679	0 2249744	2 4437871	2570
2575	1 983	0 2973902	1 7111423	1 677	0 2246239	2 4444890	2575
2580	1 982	0 2970296	1 7116336	1 676	0 2242743	2 4451909	2580
2585	1 980	0 2966697	1 7121249	1 675	0 2239255	2 4458928	2585
2590	1 978	0 2963107	1 7126162	1 673	0 2235775	2 4465946	2590
2595	1 977	0 2959524	1 7131076	1 672	0 2232303	2 4472965	2595
2600	1 975	0 2955949	1 7135989	1 671	0 2228839	2 4479984	2600
2605	1 974	0 2952383	1 7140902	1 669	0 2225383	2 4487003	2605
2610	1 972	0 2948824	1 7145815	1 668	0 2221934	2 4494021	2610
2615	1 970	0 2945273	1 7150728	1 667	0 2218493	2 4501040	2615
2620	1 969	0 2941730	1 7155641	1 665	0 2215060	2 4508059	2620
2625	1 967	0 2938195	1 7160554	1 664	0 2211636	2 4515078	2625
2630	1 965	0 2934668	1 7165467	1 663	0 2208219	2 4522096	2630
2635	1 964	0 2931148	1 7170381	1 661	0 2204810	2 4529115	2635
2640	1 962	0 2927637	1 7175294	1 660	0 2201408	2 4536134	2640
2645	1 961	0 2924133	1 7180207	1 659	0 2198014	2 4543153	2645
2650	1 959	0 2920636	1 7185120	1 658	0 2194628	2 4550171	2650
2655	1 958	0 2917147	1 7190033	1 656	0 2191248	2 4557190	2655
2660	1 956	0 2913666	1 7194946	1 655	0 2187877	2 4564209	2660
2665	1 954	0 2910192	1 7199859	1 654	0 2184513	2 4571228	2665
2670	1 953	0 2906726	1 7204772	1 652	0 2181157	2 4578246	2670
2675	1 951	0 2903268	1 7209686	1 651	0 2177809	2 4585265	2675
2680	1 950	0 2899817	1 7214599	1 650	0 2174467	2 4592284	2680
2685	1 948	0 2896374	1 7219512	1 649	0 2171134	2 4599303	2685
2690	1 947	0 2892938	1 7224425	1 647	0 2167808	2 4606321	2690
2695	1 945	0 2889509	1 7229338	1 646	0 2164488	2 4613340	2695
2700	1 944	0 2886087	1 7234251	1 645	0 2161177	2 4620359	2700

Sine of Inclination (1 over)	n = ·009			n = ·010			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2705	4·817	0·6827468	·44329280	4·430	0·6463748	·49254755	2705
2710	4·812	0·6823701	·44341913	4·426	0·6460003	·49268793	2710
2715	4·808	0·6819942	·44354547	4·422	0·6456264	·49282830	2715
2720	4·804	0·6816189	·44367181	4·418	0·6452532	·49296868	2720
2725	4·800	0·6812445	·44379815	4·414	0·6448809	·49310905	2725
2730	4·796	0·6808708	·44392448	4·411	0·6445094	·49324943	2730
2735	4·792	0·6804979	·44405082	4·407	0·6441385	·49338980	2735
2740	4·788	0·6801253	·44417716	4·403	0·6437684	·49353018	2740
2745	4·784	0·6797540	·44430350	4·399	0·6433989	·49367055	2745
2750	4·780	0·6793831	·44442983	4·396	0·6430302	·49381093	2750
2755	4·775	0·6790129	·44455617	4·392	0·6426622	·49395130	2755
2760	4·771	0·6786435	·44468251	4·388	0·6422949	·49409168	2760
2765	4·767	0·6782748	·44480885	4·385	0·6419283	·49423205	2765
2770	4·763	0·6779068	·44493518	4·381	0·6415625	·49437243	2770
2775	4·759	0·6775394	·44506152	4·377	0·6411972	·49451280	2775
2780	4·755	0·6771728	·44518786	4·374	0·6408327	·49465318	2780
2785	4·751	0·6768069	·44531420	4·370	0·6404689	·49479355	2785
2790	4·747	0·6764417	·44544053	4·366	0·6401059	·49493393	2790
2795	4·743	0·6760773	·44556687	4·363	0·6397435	·49507430	2795
2800	4·739	0·6757135	·44569321	4·359	0·6393819	·49521468	2800
2805	4·735	0·6753504	·44581955	4·355	0·6390209	·49535505	2805
2810	4·731	0·6749880	·44594588	4·352	0·6386606	·49549543	2810
2815	4·727	0·6746262	·44607222	4·348	0·6383010	·49563580	2815
2820	4·724	0·6742651	·44619856	4·345	0·6379420	·49577618	2820
2825	4·720	0·6739047	·44632490	4·341	0·6375837	·49591655	2825
2830	4·716	0·6735451	·44645123	4·337	0·6372262	·49605693	2830
2835	4·712	0·6731861	·44657757	4·334	0·6368693	·49619730	2835
2840	4·708	0·6728278	·44670391	4·330	0·6365132	·49633768	2840
2845	4·704	0·6724701	·44683025	4·327	0·6361576	·49647805	2845
2850	4·700	0·6721131	·44695658	4·323	0·6358027	·49661843	2850
2855	4·696	0·6717568	·44708292	4·320	0·6354485	·49675880	2855
2860	4·692	0·6714010	·44720926	4·316	0·6350949	·49689918	2860
2865	4·689	0·6710461	·44733560	4·313	0·6347421	·49703955	2865
2870	4·685	0·6706918	·44746193	4·309	0·6343899	·49717993	2870
2875	4·681	0·6703381	·44758827	4·306	0·6340383	·49732030	2875
2880	4·677	0·6699850	·44771461	4·302	0·6336874	·49746068	2880
2885	4·673	0·6696325	·44784095	4·299	0·6333371	·49760105	2885
2890	4·670	0·6692807	·44796728	4·295	0·6329875	·49774143	2890
2895	4·666	0·6689296	·44809362	4·292	0·6326385	·49788180	2895
2900	4·662	0·6685790	·44821996	4·288	0·6322902	·49802218	2900
2905	4·658	0·6682291	·44834630	4·285	0·6319425	·49816255	2905
2910	4·655	0·6678799	·44847263	4·281	0·6315955	·49830293	2910
2915	4·651	0·6675312	·44859897	4·278	0·6312491	·49844330	2915
2920	4·647	0·6671833	·44872531	4·275	0·6309034	·49858368	2920
2925	4·643	0·6668360	·44885165	4·271	0·6305583	·49872405	2925
2930	4·640	0·6664903	·44897798	4·268	0·6302138	·49886443	2930
2935	4·636	0·6661443	·44910432	4·265	0·6298699	·49900480	2935
2940	4·632	0·6657990	·44923066	4·261	0·6295266	·49914518	2940
2945	4·629	0·6654543	·44935700	4·258	0·6291840	·49928555	2945
2950	4·625	0·6651102	·44948333	4·254	0·6288421	·49942593	2950

Sine of Inclination (1 over)	n = 011			n = 012			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2705	4 113	0 6141691	54180231	3 849	0 5853773	59105706	2705
2710	4 110	0 6137966	54195672	3 846	0 5850067	59122551	2710
2715	4 106	0 6134248	54211113	3 843	0 5846368	59139396	2715
2720	4 103	0 6130537	54226554	3 839	0 5842676	59156241	2720
2725	4 099	0 6126834	54241996	3 836	0 5838993	59173086	2725
2730	4 096	0 6123139	54257437	3 833	0 5835318	59189931	2730
2735	4 092	0 6119451	54272878	3 830	0 5831649	59206776	2735
2740	4 089	0 6115770	54288319	3 826	0 5827987	59223621	2740
2745	4 085	0 6112095	54303761	3 823	0 5824332	59240466	2745
2750	4 082	0 6108428	54319202	3 820	0 5820685	59257311	2750
2755	4 078	0 6104768	54334643	3 817	0 5817044	59274156	2755
2760	4 075	0 6101116	54350084	3 814	0 5813411	59291001	2760
2765	4 071	0 6097471	54365526	3 810	0 5809785	59307846	2765
2770	4 068	0 6093833	54380967	3 807	0 5806167	59324691	2770
2775	4 065	0 6090200	54396408	3 804	0 5802554	59341536	2775
2780	4 061	0 6086575	54411849	3 801	0 5798949	59358381	2780
2785	4 058	0 6082958	54427291	3 798	0 5795352	59375226	2785
2790	4 054	0 6079349	54442732	3 795	0 5791761	59392071	2790
2795	4 051	0 6075745	54458173	3 792	0 5788177	59408916	2795
2800	4 048	0 6072149	54473614	3 788	0 5784600	59425761	2800
2805	4 044	0 6068559	54489056	3 785	0 5781030	59442606	2805
2810	4 041	0 6064977	54504497	3 782	0 5777467	59459451	2810
2815	4 038	0 6061401	54519938	3 779	0 5773910	59476296	2815
2820	4 034	0 6057832	54535379	3 776	0 5770360	59493141	2820
2825	4 031	0 6054269	54550821	3 773	0 5766817	59509986	2825
2830	4 028	0 6050714	54566262	3 770	0 5763282	59526831	2830
2835	4 025	0 6047166	54581703	3 767	0 5759753	59543676	2835
2840	4 021	0 6043625	54597144	3 764	0 5756231	59560521	2840
2845	4 018	0 6040089	54612586	3 761	0 5752715	59577366	2845
2850	4 015	0 6036560	54628027	3 758	0 5749206	59594211	2850
2855	4 011	0 6033038	54643468	3 755	0 5745703	59611056	2855
2860	4 008	0 6029523	54658909	3 752	0 5742208	59627901	2860
2865	4 005	0 6026015	54674351	3 749	0 5738719	59644746	2865
2870	4 002	0 6022513	54689792	3 746	0 5735237	59661591	2870
2875	3 999	0 6019017	54705233	3 743	0 5731761	59678436	2875
2880	3 995	0 6015528	54720674	3 740	0 5728291	59695281	2880
2885	3 992	0 6012045	54736116	3 737	0 5724828	59712126	2885
2890	3 989	0 6008569	54751557	3 734	0 5721372	59728971	2890
2895	3 986	0 6005101	54766998	3 731	0 5717923	59745816	2895
2900	3 983	0 6001638	54782439	3 728	0 5714479	59762661	2900
2905	3 979	0 5998182	54797881	3 725	0 5711041	59779506	2905
2910	3 976	0 5994731	54813322	3 722	0 5707610	59796351	2910
2915	3 973	0 5991286	54828763	3 719	0 5704186	59813196	2915
2920	3 970	0 5987849	54844204	3 716	0 5700768	59830041	2920
2925	3 967	0 5984419	54859646	3 713	0 5697357	59846886	2925
2930	3 964	0 5980995	54875087	3 710	0 5693952	59863731	2930
2935	3 961	0 5977576	54890528	3 707	0 5690552	59880576	2935
2940	3 957	0 5974164	54905969	3 704	0 5687160	59897421	2940
2945	3 954	0 5970760	54921411	3 701	0 5683773	59914266	2945
2950	3 951	0 5967360	54936852	3 699	0 5680394	59931111	2950

Sine of Inclination (1 over)	n = ·013			n = ·014			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2705	3·626	0·5594292	·64031182	3·435	0·5358832	·68956657	2705
2710	3·623	0·5590605	·64049430	3·432	0·5355163	·68976310	2710
2715	3·620	0·5586925	·64067679	3·429	0·5351501	·68995962	2715
2720	3·617	0·5583252	·64085928	3·426	0·5347847	·69015615	2720
2725	3·614	0·5579587	·64104177	3·423	0·5344200	·69035267	2725
2730	3·611	0·5575930	·64122425	3·420	0·5340561	·69054920	2730
2735	3·608	0·5572281	·64140674	3·417	0·5336929	·69074572	2735
2740	3·605	0·5568638	·64158923	3·415	0·5333304	·69094225	2740
2745	3·602	0·5565002	·64177172	3·412	0·5329686	·69113877	2745
2750	3·599	0·5561373	·64195420	3·409	0·5326075	·69133530	2750
2755	3·596	0·5557751	·64213669	3·406	0·5322471	·69153182	2755
2760	3·593	0·5554137	·64231918	3·403	0·5318875	·69172835	2760
2765	3·590	0·5550530	·64250167	3·400	0·5315286	·69192487	2765
2770	3·587	0·5546930	·64268415	3·398	0·5311704	·69212140	2770
2775	3·584	0·5543336	·64286664	3·395	0·5308128	·69231792	2775
2780	3·581	0·5539750	·64304913	3·392	0·5304560	·69251445	2780
2785	3·578	0·5536171	·64323162	3·389	0·5300999	·69271097	2785
2790	3·575	0·5532598	·64341410	3·386	0·5297444	·69290750	2790
2795	3·572	0·5529033	·64359659	3·384	0·5293897	·69310402	2795
2800	3·569	0·5525475	·64377908	3·381	0·5290357	·69330055	2800
2805	3·566	0·5521924	·64396157	3·378	0·5286824	·69349707	2805
2810	3·563	0·5518380	·64414405	3·375	0·5283298	·69369360	2810
2815	3·560	0·5514842	·64432654	3·373	0·5279777	·69389012	2815
2820	3·557	0·5511310	·64450903	3·370	0·5276264	·69408665	2820
2825	3·554	0·5507785	·64469152	3·367	0·5272758	·69428317	2825
2830	3·552	0·5504269	·64487400	3·365	0·5269260	·69447970	2830
2835	3·549	0·5500759	·64505649	3·362	0·5265767	·69467622	2835
2840	3·546	0·5497256	·64523898	3·359	0·5262281	·69487275	2840
2845	3·543	0·5493758	·64542147	3·356	0·5258802	·69506927	2845
2850	3·540	0·5490268	·64560395	3·354	0·5255329	·69526580	2850
2855	3·537	0·5486785	·64578644	3·351	0·5251864	·69546232	2855
2860	3·535	0·5483307	·64596893	3·348	0·5248404	·69565885	2860
2865	3·532	0·5479836	·64615142	3·346	0·5244952	·69585537	2865
2870	3·529	0·5476373	·64633390	3·343	0·5241506	·69605190	2870
2875	3·526	0·5472915	·64651639	3·340	0·5238067	·69624842	2875
2880	3·523	0·5469465	·64669888	3·338	0·5234634	·69644495	2880
2885	3·520	0·5466021	·64678137	3·335	0·5231207	·69664147	2885
2890	3·518	0·5462583	·64696385	3·333	0·5227787	·69683800	2890
2895	3·515	0·5459152	·64714634	3·330	0·5224375	·69703452	2895
2900	3·512	0·5455726	·64732883	3·327	0·5220967	·69723105	2900
2905	3·509	0·5452307	·64751132	3·325	0·5217566	·69742757	2905
2910	3·507	0·5448896	·64769380	3·322	0·5214173	·69762410	2910
2915	3·504	0·5445490	·64787629	3·320	0·5210785	·69782062	2915
2920	3·501	0·5442092	·64805878	3·317	0·5207404	·69801715	2920
2925	3·498	0·5438699	·64824127	3·314	0·5204029	·69821367	2925
2930	3·496	0·5435312	·64842375	3·312	0·5200660	·69841020	2930
2935	3·493	0·5431931	·64860624	3·309	0·5197297	·69860672	2935
2940	3·490	0·5428557	·64878873	3·307	0·5193941	·69880325	2940
2945	3·488	0·5425189	·64897122	3·304	0·5190591	·69899977	2945
2950	3·485	0·5421829	·64925370	3·302	0·5187248	·69919630	2950

Sine of Inclination 1 over)	n = 015			n = 017			Sine of Inclination 1 over)
	N	log N	D	N	log N	D	
2705	3 269	0 5143902	73882132	2 996	0 4764930	83733084	2705
2710	3 266	0 5140250	73903189	2 993	0 4761311	83756947	2710
2715	3 263	0 5136606	73924245	2 991	0 4757700	83780811	2715
2720	3 261	0 5132968	73945301	2 988	0 4754095	83804675	2720
2725	3 258	0 5129339	73966358	2 986	0 4750498	83828539	2725
2730	3 255	0 5125717	73987414	2 983	0 4746909	83852402	2730
2735	3 252	0 5122103	74008470	2 981	0 4743327	83876266	2735
2740	3 250	0 5118495	74029526	2 978	0 4739752	83900130	2740
2745	3 247	0 5114895	74050583	2 976	0 4736184	83923994	2745
2750	3 244	0 5111301	74071639	2 973	0 4732623	83947857	2750
2755	3 242	0 5107715	74092695	2 971	0 4729069	83971721	2755
2760	3 239	0 5104136	74113751	2 969	0 4725523	83995585	2760
2765	3 236	0 5100564	74134808	2 966	0 4721984	84019449	2765
2770	3 234	0 5096999	74155864	2 964	0 4718452	84043312	2770
2775	3 231	0 5093440	74176920	2 961	0 4714926	84067176	2775
2780	3 228	0 5089889	74197976	2 959	0 4711408	84091040	2780
2785	3 226	0 5086346	74219033	2 957	0 4707896	84114904	2785
2790	3 223	0 5082809	74240089	2 954	0 4704392	84138767	2790
2795	3 221	0 5079279	74261145	2 952	0 4700895	84162631	2795
2800	3 218	0 5075756	74282201	2 949	0 4697404	84186495	2800
2805	3 215	0 5072240	74303258	2 947	0 4693921	84210359	2805
2810	3 213	0 5068731	74324314	2 945	0 4690444	84234222	2810
2815	3 210	0 5065228	74345370	2 942	0 4686974	84258086	2815
2820	3 208	0 5061732	74366426	2 940	0 4683510	84281950	2820
2825	3 205	0 5058243	74387483	2 938	0 4680054	84305814	2825
2830	3 202	0 5054761	74408539	2 935	0 4676605	84329677	2830
2835	3 200	0 5051286	74429595	2 933	0 4673162	84353541	2835
2840	3 197	0 5047818	74450651	2 931	0 4669727	84377405	2840
2845	3 195	0 5044356	74471708	2 928	0 4666297	84401269	2845
2850	3 192	0 5040901	74492764	2 926	0 4662874	84425132	2850
2855	3 190	0 5037452	74513820	2 924	0 4659459	84448996	2855
2860	3 187	0 5034010	74534876	2 921	0 4656050	84472860	2860
2865	3 185	0 5030574	74555933	2 919	0 4652647	84496724	2865
2870	3 182	0 5027146	74576989	2 917	0 4649251	84520587	2870
2875	3 180	0 5023724	74598045	2 915	0 4645861	84544451	2875
2880	3 177	0 5020308	74619101	2 912	0 4642478	84568315	2880
2885	3 175	0 5016899	74640158	2 910	0 4639101	84592179	2885
2890	3 172	0 5013496	74661214	2 908	0 4635731	84616042	2890
2895	3 170	0 5010101	74682270	2 906	0 4632368	84639906	2895
2900	3 167	0 5006710	74703326	2 903	0 4629010	84663770	2900
2905	3 165	0 5003327	74724383	2 901	0 4625658	84687634	2905
2910	3 162	0 4999950	74745439	2 899	0 4622314	84711497	2910
2915	3 160	0 4996580	74766495	2 897	0 4618976	84735361	2915
2920	3 157	0 4993216	74787551	2 894	0 4615645	84759225	2920
2925	3 155	0 4989859	74808608	2 892	0 4612320	84783089	2925
2930	3 152	0 4986507	74829664	2 890	0 4609000	84806952	2930
2935	3 150	0 4983161	74850720	2 888	0 4605687	84830816	2935
2940	3 148	0 4979822	74871776	2 886	0 4602381	84854680	2940
2945	3 145	0 4976489	74892833	2 883	0 4599080	84878544	2945
2950	3 143	0 4973163	74913889	2 881	0 4595787	84902407	2950

Sine of Inclination (1 over)	n = ·020			n = ·0225			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2705	2·688	0·4294888	·98509510	2·495	0·3970507	1·1082320	2705
2710	2·686	0·4291314	·98537585	2·493	0·3966967	1·1085478	2710
2715	2·681	0·4287747	·98565660	2·491	0·3963434	1·1088637	2715
2720	2·682	0·4284186	·98593785	2·489	0·3959908	1·1091795	2720
2725	2·680	0·4280634	·98621810	2·487	0·3956390	1·1094954	2725
2730	2·677	0·4277090	·98649885	2·485	0·3952880	1·1098112	2730
2735	2·675	0·4273553	·98677960	2·483	0·3949376	1·1101271	2735
2740	2·673	0·4270023	·98706035	2·481	0·3945879	1·1104429	2740
2745	2·671	0·4266499	·98734110	2·479	0·3942390	1·1107587	2745
2750	2·669	0·4262983	·98762185	2·477	0·3938908	1·1110746	2750
2755	2·667	0·4259473	·98790260	2·475	0·3935432	1·1113904	2755
2760	2·664	0·4255972	·98818335	2·473	0·3931964	1·1117063	2760
2765	2·662	0·4252478	·98846410	2·471	0·3928503	1·1120221	2765
2770	2·660	0·4248990	·98874485	2·469	0·3925049	1·1123380	2770
2775	2·658	0·4245509	·98902560	2·467	0·3921602	1·1126538	2775
2780	2·656	0·4242035	·98930635	2·465	0·3918162	1·1129696	2780
2785	2·654	0·4238568	·98958710	2·463	0·3914729	1·1132855	2785
2790	2·652	0·4235108	·98986785	2·461	0·3911303	1·1136013	2790
2795	2·650	0·4231656	·99014860	2·459	0·3907884	1·1139172	2795
2800	2·647	0·4228210	·99042935	2·457	0·3904472	1·1142330	2800
2805	2·645	0·4224771	·99071010	2·455	0·3901066	1·1145489	2805
2810	2·643	0·4221339	·99099085	2·453	0·3897668	1·1148647	2810
2815	2·641	0·4217913	·99127160	2·451	0·3894276	1·1151806	2815
2820	2·639	0·4214494	·99155235	2·450	0·3890891	1·1154964	2820
2825	2·637	0·4211083	·99183310	2·448	0·3887512	1·1158122	2825
2830	2·635	0·4207679	·99211385	2·446	0·3884141	1·1161281	2830
2835	2·633	0·4204280	·99239460	2·444	0·3880777	1·1164439	2835
2840	2·631	0·4200889	·99267535	2·442	0·3877420	1·1167598	2840
2845	2·629	0·4197504	·99295610	2·440	0·3874068	1·1170756	2845
2850	2·627	0·4194126	·99323685	2·438	0·3870723	1·1173915	2850
2855	2·625	0·4190755	·99351760	2·436	0·3867386	1·1177073	2855
2860	2·623	0·4187389	·99379835	2·434	0·3864054	1·1180231	2860
2865	2·621	0·4184031	·99407910	2·433	0·3860729	1·1183390	2865
2870	2·619	0·4180679	·99435985	2·431	0·3857411	1·1186548	2870
2875	2·617	0·4177334	·99464060	2·429	0·3854099	1·1189707	2875
2880	2·615	0·4173995	·99492135	2·427	0·3850795	1·1192865	2880
2885	2·613	0·4170663	·99520210	2·425	0·3847496	1·1196024	2885
2890	2·611	0·4167338	·99548285	2·423	0·3844204	1·1199182	2890
2895	2·609	0·4164019	·99576360	2·422	0·3840919	1·1202341	2895
2900	2·607	0·4160705	·99604435	2·420	0·3837639	1·1205499	2900
2905	2·605	0·4157398	·99632510	2·418	0·3834365	1·1208657	2905
2910	2·603	0·4154098	·99660585	2·416	0·3831099	1·1211816	2910
2915	2·601	0·4150804	·99688660	2·414	0·3827839	1·1214974	2915
2920	2·599	0·4147518	·99716735	2·412	0·3824586	1·1218133	2920
2925	2·597	0·4144237	·99744810	2·411	0·3821339	1·1221291	2925
2930	2·595	0·4140962	·99772885	2·409	0·3818097	1·1224450	2930
2935	2·593	0·4137693	·99800960	2·407	0·3814861	1·1227608	2935
2940	2·591	0·4134431	·99829035	2·405	0·3811633	1·1230766	2940
2945	2·589	0·4131175	·99857110	2·403	0·3808411	1·1233925	2945
2950	2·587	0·4127926	·99885185	2·402	0·3805195	1·1237083	2950

Sine of Inclination (1 over)	n = 0250			n = 0275			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2705	2 340	0 3692346	1 2313689	2 213	0 3450714	1 3545058	2705
2710	2 338	0 3688837	1 2317198	2 212	0 3447233	1 3548918	2710
2715	2 336	0 3685335	1 2320708	2 210	0 3443760	1 3552778	2715
2720	2 334	0 3681840	1 2324217	2 208	0 3440293	1 3556639	2720
2725	2 333	0 3678352	1 2327726	2 206	0 3436834	1 3560499	2725
2730	2 331	0 3674873	1 2331236	2 205	0 3433383	1 3564359	2730
2735	2 329	0 3671401	1 2334745	2 203	0 3429940	1 3568220	2735
2740	2 327	0 3667935	1 2338254	2 201	0 3426503	1 3572080	2740
2745	2 325	0 3664476	1 2341764	2 199	0 3423073	1 3575940	2745
2750	2 323	0 3661025	1 2345273	2 198	0 3419650	1 3579800	2750
2755	2 321	0 3657580	1 2348783	2 196	0 3416234	1 3583661	2755
2760	2 320	0 3654141	1 2352292	2 194	0 3412826	1 3587521	2760
2765	2 318	0 3650714	1 2355801	2 193	0 3409425	1 3591381	2765
2770	2 316	0 3647291	1 2359311	2 191	0 3406031	1 3595242	2770
2775	2 314	0 3643874	1 2362820	2 189	0 3402642	1 3599102	2775
2780	2 312	0 3640465	1 2366329	2 187	0 3399262	1 3602962	2780
2785	2 311	0 3637063	1 2369839	2 186	0 3395888	1 3606823	2785
2790	2 309	0 3633668	1 2373348	2 184	0 3392521	1 3610683	2790
2795	2 307	0 3630280	1 2376858	2 182	0 3389162	1 3614543	2795
2800	2 305	0 3626899	1 2380367	2 181	0 3385809	1 3618404	2800
2805	2 303	0 3623525	1 2383876	2 179	0 3382464	1 3622264	2805
2810	2 301	0 3620157	1 2387386	2 177	0 3379125	1 3626124	2810
2815	2 300	0 3616796	1 2390895	2 176	0 3375792	1 3629985	2815
2820	2 298	0 3613442	1 2394404	2 174	0 3372466	1 3633845	2820
2825	2 296	0 3610094	1 2397914	2 172	0 3369147	1 3637705	2825
2830	2 294	0 3606754	1 2401423	2 171	0 3365836	1 3641565	2830
2835	2 293	0 3603421	1 2404933	2 169	0 3362531	1 3645426	2835
2840	2 291	0 3600094	1 2408442	2 167	0 3359233	1 3649286	2840
2845	2 289	0 3596774	1 2411951	2 166	0 3355941	1 3653146	2845
2850	2 287	0 3593460	1 2415461	2 164	0 3352656	1 3657007	2850
2855	2 286	0 3590153	1 2418970	2 162	0 3349377	1 3660867	2855
2860	2 284	0 3586853	1 2422479	2 161	0 3346105	1 3664727	2860
2865	2 282	0 3583559	1 2425989	2 159	0 3342840	1 3668588	2865
2870	2 280	0 3580272	1 2429498	2 158	0 3339581	1 3672448	2870
2875	2 279	0 3576991	1 2433008	2 156	0 3336328	1 3676308	2875
2880	2 277	0 3573717	1 2436517	2 154	0 3333083	1 3680169	2880
2885	2 275	0 3570448	1 2440026	2 152	0 3329843	1 3684029	2885
2890	2 274	0 3567187	1 2443536	2 151	0 3326610	1 3687889	2890
2895	2 272	0 3563933	1 2447045	2 150	0 3323385	1 3691750	2895
2900	2 270	0 3560683	1 2450554	2 148	0 3320164	1 3695610	2900
2905	2 269	0 3557441	1 2454064	2 146	0 3316949	1 3699470	2905
2910	2 267	0 3554206	1 2457573	2 145	0 3313742	1 3703330	2910
2915	2 265	0 3550976	1 2461083	2 143	0 3310541	1 3707191	2915
2920	2 263	0 3547754	1 2464592	2 142	0 3307347	1 3711051	2920
2925	2 262	0 3544537	1 2468101	2 140	0 3304159	1 3714911	2925
2930	2 260	0 3541326	1 2471611	2 138	0 3300977	1 3718772	2930
2935	2 258	0 3538122	1 2475120	2 137	0 3297801	1 3722632	2935
2940	2 257	0 3534924	1 2478629	2 135	0 3294631	1 3726492	2940
2945	2 255	0 3531732	1 2482139	2 134	0 3291467	1 3730353	2945
2950	2 253	0 3528547	1 2485648	2 132	0 3288311	1 3734213	2950

Sine of Inclination (1 over)	n = ·010			n = ·011			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2955	4·251	0·6285008	·49956680	3·948	0·5963965	·54952293	2955
2960	4·248	0·6281600	·49970668	3·945	0·5960578	·54967734	2960
2965	4·244	0·6278199	·49984705	3·942	0·5957198	·54983176	2965
2970	4·241	0·6274804	·49998743	3·939	0·5953823	·54998617	2970
2975	4·238	0·6271415	·50012780	3·936	0·5950455	·55014058	2975
2980	4·235	0·6268032	·50026818	3·933	0·5947091	·55029499	2980
2985	4·231	0·6264655	·50040855	3·930	0·5943735	·55044941	2985
2990	4·228	0·6261285	·50054893	3·927	0·5940385	·55060382	2990
2995	4·225	0·6257920	·50068930	3·924	0·5937041	·55075823	2995
3000	4·221	0·6254562	·50082968	3·921	0·5933703	·55091264	3000
3010	4·215	0·6247864	·50111043	3·915	0·5927045	·55122147	3010
3020	4·208	0·6241189	·50139118	3·909	0·5920411	·55153029	3020
3030	4·202	0·6234527	·50167193	3·903	0·5913799	·55183912	3030
3040	4·196	0·6227909	·50195268	3·897	0·5907212	·55214794	3040
3050	4·189	0·6221305	·50223343	3·891	0·5900648	·55245677	3050
3060	4·183	0·6214724	·50251418	3·885	0·5894106	·55276559	3060
3070	4·177	0·6208166	·50279493	3·879	0·5887589	·55307442	3070
3080	4·170	0·6201631	·50307568	3·874	0·5881096	·55338324	3080
3090	4·164	0·6195119	·50335643	3·868	0·5874625	·55369207	3090
3100	4·158	0·6188629	·50363718	3·862	0·5868175	·55400089	3100
3110	4·152	0·6182162	·50391793	3·856	0·5861746	·55430972	3110
3120	4·145	0·6175718	·50419868	3·851	0·5855342	·55461854	3120
3130	4·139	0·6169296	·50447943	3·845	0·5848962	·55492737	3130
3140	4·133	0·6162897	·50476018	3·839	0·5842603	·55523619	3140
3150	4·127	0·6156519	·50504093	3·834	0·5836265	·55554502	3150
3160	4·121	0·6150163	·50532168	3·828	0·5829950	·55585384	3160
3170	4·115	0·6143828	·50560243	3·823	0·5823655	·55616267	3170
3180	4·109	0·6137514	·50588318	3·817	0·5817380	·55647149	3180
3190	4·103	0·6131222	·50616393	3·812	0·5811129	·55678032	3190
3200	4·097	0·6124952	·50644468	3·806	0·5804899	·55708914	3200
3220	4·087	0·6112475	·50700618	3·795	0·5792502	·55770679	3220
3240	4·074	0·6100081	·50756768	3·785	0·5780189	·55832444	3240
3260	4·062	0·6087770	·50812918	3·774	0·5767958	·55894209	3260
3280	4·051	0·6075540	·50869068	3·763	0·5755808	·55955974	3280
3300	4·040	0·6063391	·50925218	3·753	0·5743740	·56017739	3300
3320	4·028	0·6051322	·50981368	3·743	0·5731751	·56079504	3320
3340	4·017	0·6039330	·51037518	3·732	0·5719839	·56141269	3340
3360	4·006	0·6027415	·51093668	3·722	0·5708005	·56203034	3360
3380	3·995	0·6015577	·51149818	3·712	0·5696247	·56264799	3380
3400	3·985	0·6003815	·51205968	3·702	0·5684566	·56326564	3400
3420	3·974	0·5992129	·51262118	3·692	0·5672960	·56388329	3420
3440	3·963	0·5980517	·51318268	3·682	0·5661428	·56450094	3440
3460	3·953	0·5968978	·51374418	3·673	0·5649968	·56511859	3460
3480	3·942	0·5957511	·51430568	3·663	0·5638581	·56573624	3480
3500	3·932	0·5946116	·51486718	3·654	0·5627265	·56635389	3500
3520	3·922	0·5934791	·51542868	3·644	0·5616020	·56697154	3520
3540	3·912	0·5923536	·51599018	3·635	0·5604845	·56758919	3540
3560	3·902	0·5912349	·51655168	3·626	0·5593739	·56820684	3560
3580	3·892	0·5901231	·51711318	3·616	0·5582701	·56882449	3580
3600	3·882	0·5890182	·51767468	3·607	0·5571731	·56944214	3600

Sine of Inclination (1 over)	n = 012			n = 013			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2955	3 696	0 5677020	59947956	3 482	0 5418474	64943619	2955
2960	3 693	0 5673653	59964801	3 479	0 5415125	64961868	2960
2965	3 690	0 5670292	59981646	3 477	0 5411782	64980117	2965
2970	3 687	0 5666936	59998491	3 474	0 5408444	64998365	2970
2975	3 684	0 5663586	60015336	3 471	0 5405113	65016614	2975
2980	3 681	0 5660242	60032181	3 469	0 5401789	65034863	2980
2985	3 679	0 5656906	60049026	3 466	0 5398471	65053112	2985
2990	3 676	0 5653576	60065871	3 464	0 5395159	65071360	2990
2995	3 673	0 5650251	60082716	3 461	0 5391853	65089609	2995
3000	3 670	0 5646932	60099561	3 458	0 5388553	65107858	3000
3010	3 665	0 5640312	60133251	3 453	0 5381970	65144355	3010
3020	3 659	0 5633717	60166941	3 448	0 5375411	65180853	3020
3030	3 654	0 5627144	60200631	3 443	0 5368876	65217350	3030
3040	3 648	0 5620595	60234321	3 437	0 5362365	65253848	3040
3050	3 643	0 5614070	60268011	3 432	0 5355877	65290345	3050
3060	3 637	0 5607569	60301701	3 427	0 5349412	65326843	3060
3070	3 632	0 5601090	60335391	3 422	0 5342970	65363340	3070
3080	3 626	0 5594634	60369081	3 417	0 5336551	65399838	3080
3090	3 621	0 5588200	60402771	3 412	0 5330155	65436335	3090
3100	3 616	0 5581790	60436461	3 407	0 5323782	65472833	3100
3110	3 610	0 5575401	60470151	3 402	0 5317431	65509330	3110
3120	3 605	0 5569036	60503841	3 397	0 5311102	65545828	3120
3130	3 600	0 5562694	60537531	3 392	0 5304796	65582325	3130
3140	3 594	0 5556373	60571221	3 387	0 5298513	65618823	3140
3150	3 589	0 5550074	60604911	3 382	0 5292252	65655320	3150
3160	3 584	0 5543797	60638601	3 378	0 5286011	65691818	3160
3170	3 579	0 5537541	60672291	3 373	0 5279792	65728315	3170
3180	3 574	0 5531305	60705981	3 368	0 5273594	65764813	3180
3190	3 569	0 5525092	60739671	3 363	0 5267417	65801310	3190
3200	3 564	0 5518901	60773361	3 358	0 5261263	65837808	3200
3220	3 554	0 5506582	60840741	3 349	0 5249018	65910803	3220
3240	3 544	0 5494345	60908121	3 340	0 5236855	65983798	3240
3260	*3 534*	*0 5482191*	*60975501*	*3 330*	*0 5224775*	*66056793*	*3260*
3280	3 524	0 5470119	61042881	3 321	0 5212776	66129788	3280
3300	3 514	0 5458127	61110261	3 312	0 5200858	66202783	3300
3320	3 504	0 5446214	61177641	3 303	0 5189019	66275778	3320
3340	3 495	0 5434381	61245021	3 294	0 5177258	66348773	3340
3360	3 485	0 5422623	61312401	3 285	0 5165574	66421768	3360
3380	3 476	0 5410941	61379781	3 276	0 5153966	66494763	3380
3400	3 467	0 5399336	61447161	3 268	0 5142436	66567758	3400
3420	3 458	0 5387809	61514541	3 259	0 5130979	66640753	3420
3440	3 449	0 5376351	61581921	3 251	0 5119597	66713748	3440
3460	3 440	0 5364969	61649301	3 242	0 5108288	66786743	3460
3480	3 431	0 5353658	61716681	3 234	0 5097050	66859738	3480
3500	3 422	0 5342419	61784061	3 225	0 5085885	66932733	3500
3520	3 413	0 5331250	61851441	3 217	0 5074790	67005728	3520
3540	3 404	0 5320151	61918821	3 209	0 5063764	67078723	3540
3560	3 396	0 5309120	61986201	3 201	0 5052807	67151718	3560
3580	3 387	0 5298159	62053581	3 193	0 5041919	67224713	3580
3600	3 379	0 5287265	62120961	3 185	0 5031098	67297708	3600

Sine of Inclination (1 over)	n = ·014			n = ·015			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2955	3·299	0·5183911	·69939282	3·140	0·4969844	·74934945	2955
2960	3·297	0·5180580	·69958935	3·138	0·4966530	·74956001	2960
2965	3·294	0·5177255	·69978587	3·136	0·4963222	·74977058	2965
2970	3·291	0·5173936	·69998240	3·133	0·4959920	·74998114	2970
2975	3·289	0·5170623	·70017892	3·131	0·4956624	·75019170	2975
2980	3·286	0·5167316	·70037545	3·128	0·4953334	·75040226	2980
2985	3·284	0·5164016	·70057197	3·126	0·4950051	·75061283	2985
2990	3·281	0·5160721	·70076850	3·124	0·4946774	·75082339	2990
2995	3·279	0·5157433	·70096502	3·121	0·4943503	·75103395	2995
3000	3·277	0·5154150	·70116155	3·119	0·4940238	·75124451	3000
3010	3·272	0·5147604	·70155460	3·114	0·4933726	·75166564	3010
3020	3·267	0·5141081	·70194765	3·110	0·4927237	·75208676	3020
3030	3·262	0·5134581	·70234070	3·105	0·4920771	·75250789	3030
3040	3·257	0·5128105	·70273375	3·101	0·4914329	·75292901	3040
3050	3·252	0·5121653	·70312680	3·096	0·4907911	·75335014	3050
3060	3·247	0·5115224	·70351985	3·091	0·4901516	·75377126	3060
3070	3·243	0·5108818	·70391290	3·087	0·4895144	·75419239	3070
3080	3·238	0·5102435	·70430595	3·082	0·4888795	·75461351	3080
3090	3·233	0·5096074	·70469900	3·078	0·4882469	·75503464	3090
3100	3·228	0·5089736	·70509205	3·073	0·4876165	·75545576	3100
3110	3·224	0·5083421	·70548510	3·069	0·4869884	·75587689	3110
3120	3·219	0·5077128	·70587815	3·065	0·4863625	·75629801	3120
3130	3·214	0·5070858	·70627120	3·060	0·4857390	·75671914	3130
3140	3·210	0·5064610	·70666425	3·056	0·4851176	·75714026	3140
3150	3·205	0·5058384	·70705730	3·051	0·4844984	·75756139	3150
3160	3·200	0·5052178	·70745035	3·047	0·4838813	·75798251	3160
3170	3·196	0·5045995	·70784340	3·043	0·4832664	·75840364	3170
3180	3·192	0·5039833	·70823645	3·038	0·4826535	·75882476	3180
3190	3·187	0·5033692	·70862950	3·034	0·4820429	·75924589	3190
3200	3·182	0·5027573	·70902255	3·030	0·4814344	·75966701	3200
3220	3·174	0·5015398	·70980865	3·022	0·4802238	·76050926	3220
3240	3·165	0·5003306	·71059475	3·013	0·4790214	·76135151	3240
3260	3·156	0·4991297	·71138085	3·005	0·4778272	·76219376	3260
3280	3·147	0·4979369	·71216695	2·997	0·4766412	·76303601	3280
3300	3·139	0·4967522	·71295305	2·989	0·4754633	·76387826	3300
3320	3·130	0·4955754	·71373915	2·981	0·4742933	·76472051	3320
3340	3·122	0·4944064	·71452525	2·973	0·4731311	·76556276	3340
3360	3·113	0·4932450	·71531135	2·965	0·4719765	·76640501	3360
3380	3·105	0·4920913	·71609745	2·957	0·4708296	·76724726	3380
3400	3·097	0·4909453	·71688355	2·949	0·4696904	·76808951	3400
3420	3·089	0·4898067	·71766965	2·941	0·4685585	·76893176	3420
3440	3·081	0·4886756	·71845575	2·934	0·4674341	·76977401	3440
3460	3·073	0·4875517	·71924185	2·926	0·4663170	·77061626	3460
3480	3·065	0·4864350	·72002795	2·919	0·4652071	·77145851	3480
3500	3·057	0·4853254	·72081405	2·911	0·4641043	·77230076	3500
3520	3·049	0·4842229	·72160015	2·904	0·4630085	·77314301	3520
3540	3·042	0·4831274	·72238625	2·897	0·4619198	·77398526	3540
3560	3·034	0·4820387	·72317235	2·890	0·4608379	·77482751	3560
3580	3·027	0·4809569	·72395845	2·882	0·4597628	·77566976	3580
3600	3·019	0·4798818	·72474455	2·875	0·4586944	·77651201	3600

Sine of Inclination (1 over)	n = 017			n = 020			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2955	2 879	0 4592500	84926271	2 585	0 4124683	9 9913260	2955
2960	2 877	0 4589218	84950135	2 583	0 4121446	9 9941335	2960
2965	2 875	0 4585943	84973999	2 581	0 4118214	9 9969410	2965
2970	2 873	0 4582673	84997862	2 579	0 4114989	9 9997485	2970
2975	2 870	0 4579410	85021726	2 577	0 4111770	1 0002556	2975
2980	2 868	0 4576152	85045590	2 575	0 4108557	1 0005364	2980
2985	2 866	0 4572901	85069454	2 574	0 4105350	1 0008171	2985
2990	2 864	0 4569657	85093317	2 572	0 4102150	1 0010979	2990
2995	2 862	0 4566418	85117181	2 570	0 4098955	1 0013786	2995
3000	2 860	0 4563185	85141045	2 568	0 4095766	1 0016594	3000
3010	2 855	0 4556787	85188772	2 564	0 4089407	1 0022209	3010
3020	2 851	0 4550313	85236500	2 560	0 4083072	1 0027824	3020
3030	2 847	0 4543912	85284227	2 557	0 4076759	1 0033439	3030
3040	2 843	0 4537535	85331955	2 553	0 4070471	1 0039054	3040
3050	2 839	0 4531182	85379682	2 549	0 4064206	1 0044669	3050
3060	2 835	0 4524852	85427410	2 546	0 4057964	1 0050284	3060
3070	2 830	0 4518545	85475137	2 542	0 4051745	1 0055899	3070
3080	2 826	0 4512260	85522865	2 538	0 4045548	1 0061514	3080
3090	2 822	0 4505998	85570592	2 535	0 4039375	1 0067129	3090
3100	2 818	0 4499760	85618320	2 531	0 4033224	1 0072744	3100
3110	2 814	0 4493542	85666047	2 528	0 4027095	1 0078359	3110
3120	2 810	0 4487348	85713775	2 524	0 4020989	1 0083974	3120
3130	2 806	0 4481177	85761502	2 521	0 4014906	1 0089589	3130
3140	2 802	0 4475027	85809230	2 517	0 4008845	1 0095204	3140
3150	2 798	0 4468900	85856957	2 514	0 4002805	1 0100819	3150
3160	2 794	0 4462794	85904685	2 510	0 3996786	1 0106434	3160
3170	2 790	0 4456709	85952412	2 507	0 3990789	1 0112049	3170
3180	2 787	0 4450645	86000140	2 503	0 3984813	1 0117664	3180
3190	2 783	0 4444602	86047867	2 500	0 3978858	1 0123279	3190
3200	2 779	0 4438582	86095595	2 496	0 3972926	1 0128894	3200
3220	2 771	0 4426604	86191050	2 490	0 3961123	1 0140124	3220
3240	2 764	0 4414708	86286505	2 483	0 3949403	1 0151354	3240
3260	2 756	0 4402895	86381960	2 476	0 3937765	1 0162584	3260
3280	2 749	0 4391164	86477415	2 470	0 3926209	1 0173814	3280
3300	2 741	0 4379513	86572870	2 463	0 3914733	1 0185044	3300
3320	2 734	0 4367941	86668325	2 457	0 3903336	1 0196274	3320
3340	2 727	0 4356446	86763780	2 450	0 3892016	1 0207504	3340
3360	2 720	0 4345028	86859235	2 444	0 3880773	1 0218734	3360
3380	2 712	0 4333687	86954690	2 438	0 3869606	1 0229964	3380
3400	2 705	0 4322422	87050145	2 431	0 3858516	1 0241194	3400
3420	2 699	0 4311232	87145600	2 425	0 3847500	1 0252424	3420
3440	2 692	0 4300116	87241055	2 419	0 3836558	1 0263654	3440
3460	2 685	0 4289073	87336510	2 413	0 3825688	1 0274884	3460
3480	2 678	0 4278101	87431965	2 407	0 3814890	1 0286114	3480
3500	2 671	0 4267200	87527420	2 401	0 3804163	1 0297344	3500
3520	2 665	0 4256369	87622875	2 395	0 3793506	1 0308574	3520
3540	2 658	0 4245609	87718330	2 389	0 3782919	1 0319804	3540
3560	2 652	0 4234917	87813785	2 384	0 3772400	1 0331034	3560
3580	2 645	0 4224293	87909240	2 378	0 3761949	1 0342264	3580
3600	2 639	0 4213736	88004695	2 372	0 3751566	1 0353494	3600

Sine of Inclination (1 over)	n = 0275			n = 030			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
2955	2 131	0 3285160	1 3738073	2 030	0 3074312	1 4986989	2955
2960	2 129	0 3282016	1 3741934	2 028	0 3071193	1 4991200	2960
2965	2 128	0 3278877	1 3745794	2 027	0 3068080	1 4995412	2965
2970	2 126	0 3275744	1 3749654	2 025	0 3064974	1 4999623	2970
2975	2 125	0 3272617	1 3753515	2 024	0 3061873	1 5003834	2975
2980	2 123	0 3269496	1 3757375	2 022	0 3058778	1 5008045	2980
2985	2 121	0 3266382	1 3761235	2 021	0 3055690	1 5012257	2985
2990	2 120	0 3263274	1 3765095	2 020	0 3052608	1 5016468	2990
2995	2 118	0 3260172	1 3768956	2 018	0 3049532	1 5020680	2995
3000	2 117	0 3257076	1 3772816	2 017	0 3046462	1 5024890	3000
3010	2 114	0 3250902	1 3780537	2 014	0 3040340	1 5033313	3010
3020	2 111	0 3244751	1 3788257	2 011	0 3034241	1 5041735	3020
3030	2 108	0 3238623	1 3795978	2 008	0 3028166	1 5050158	3030
3040	2 105	0 3232518	1 3803699	2 005	0 3022114	1 5058580	3040
3050	2 102	0 3226437	1 3811419	2 003	0 3016085	1 5067003	3050
3060	2 099	0 3220379	1 3819140	2 000	0 3010079	1 5075425	3060
3070	2 096	0 3214344	1 3826860	1 997	0 3004096	1 5083848	3070
3080	2 093	0 3208332	1 3834581	1 994	0 2998136	1 5092270	3080
3090	2 090	0 3202343	1 3842302	1 992	0 2992198	1 5100693	3090
3100	2 088	0 3196376	1 3850022	1 989	0 2986283	1 5109115	3100
3110	2 085	0 3190430	1 3857743	1 986	0 2980390	1 5117538	3110
3120	2 082	0 3184508	1 3865464	1 984	0 2974520	1 5125960	3120
3130	2 079	0 3178609	1 3873184	1 980	0 2968672	1 5134383	3130
3140	2 076	0 3172731	1 3880905	1 978	0 2962847	1 5142805	3140
3150	2 073	0 3166875	1 3888625	1 976	0 2957042	1 5151228	3150
3160	2 071	0 3161039	1 3896346	1 973	0 2951259	1 5159650	3160
3170	2 068	0 3155226	1 3904067	1 970	0 2945496	1 5168073	3170
3180	2 065	0 3149433	1 3911787	1 968	0 2939755	1 5176495	3180
3190	2 062	0 3143661	1 3919508	1 965	0 2934036	1 5184918	3190
3200	2 060	0 3137911	1 3927229	1 963	0 2928338	1 5193340	3200
3220	2 054	0 3126476	1 3942670	1 957	0 2917005	1 5210185	3220
3240	2 049	0 3115122	1 3958111	1 952	0 2905754	1 5227030	3240
3260	2 044	0 3103849	1 3973552	1 947	0 2894585	1 5243875	3260
3280	2 038	0 3092657	1 3988994	1 942	0 2883497	1 5260720	3280
3300	2 033	0 3081544	1 4004435	1 938	0 2872489	1 5277565	3300
3320	2 028	0 3070512	1 4019876	1 933	0 2861559	1 5294410	3320
3340	2 023	0 3059558	1 4035317	1 928	0 2850706	1 5311255	3340
3360	2 018	0 3048678	1 4050759	1 923	0 2839929	1 5328100	3360
3380	2 013	0 3037874	1 4066200	1 918	0 2829228	1 5344945	3380
3400	2 008	0 3027145	1 4081641	1 914	0 2818603	1 5361790	3400
3420	2 003	0 3016493	1 4097082	1 909	0 2808052	1 5378635	3420
3440	1 998	0 3005914	1 4112524	1 904	0 2797575	1 5395480	3440
3460	1 993	0 2995406	1 4127965	1 900	0 2787170	1 5412325	3460
3480	1 988	0 2984969	1 4143406	1 895	0 2776836	1 5429170	3480
3500	1 984	0 2974604	1 4158847	1 892	0 2766572	1 5446015	3500
3520	1 979	0 2964309	1 4174289	1 886	0 2756378	1 5462860	3520
3540	1 974	0 2954083	1 4189730	1 882	0 2746253	1 5479705	3540
3560	1 970	0 2943924	1 4205171	1 878	0 2736196	1 5496550	3560
3580	1 965	0 2933834	1 4220612	1 873	0 2726207	1 5513395	3580
3600	1 961	0 2923810	1 4236054	1 868	0 2716285	1 5530240	3600

Sine of Inclination (1 over)	n = ·035			n = ·050			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2955	1·871	0·2720797	1·7484821	1·585	0·2001436	2·4978315	2955
2960	1·870	0·2717725	1·7489734	1·584	0·1998472	2·4985334	2960
2965	1·868	0·2714659	1·7494647	1·583	0·1995514	2·4992353	2965
2970	1·867	0·2711600	1·7499560	1·582	0·1992562	2·4999371	2970
2975	1·866	0·2708546	1·7504473	1·581	0·1989616	2·5006390	2975
2980	1·864	0·2705498	1·7509386	1·580	0·1986676	2·5013409	2980
2985	1·863	0·2702456	1·7514299	1·579	0·1983643	2·5020428	2985
2990	1·862	0·2699421	1·7519212	1·578	0·1980816	2·5027446	2990
2995	1·861	0·2696392	1·7524126	1·577	0·1977894	2·5034465	2995
3000	1·859	0·2693369	1·7529039	1·576	0·1974978	2·5041484	3000
3010	1·857	0·2687340	1·7538865	1·574	0·1969165	2·5055521	3010
3020	1·854	0·2681335	1·7548691	1·572	0·1963375	2·5069559	3020
3030	1·852	0·2675353	1·7558517	1·569	0·1957608	2·5083596	3030
3040	1·849	0·2669394	1·7568344	1·567	0·1951864	2·5097634	3040
3050	1·846	0·2663458	1·7578170	1·565	0·1946143	2·5111672	3050
3060	1·844	0·2657546	1·7587996	1·564	0·1940445	2·5125709	3060
3070	1·841	0·2651656	1·7597822	1·561	0·1934770	2·5139746	3070
3080	1·839	0·2645789	1·7607649	1·559	0·1929117	2·5153784	3080
3090	1·837	0·2639944	1·7617475	1·557	0·1923487	2·5167821	3090
3100	1·834	0·2634122	1·7627301	1·555	0·1917879	2·5181859	3100
3110	1·832	0·2628322	1·7637127	1·553	0·1912293	2·5195896	3110
3120	1·829	0·2622545	1·7646954	1·551	0·1906729	2·5209934	3120
3130	1·827	0·2616790	1·7656780	1·549	0·1901188	2·5223971	3130
3140	1·824	0·2611057	1·7666606	1·547	0·1895669	2·5238009	3140
3150	1·822	0·2605345	1·7676432	1·545	0·1890171	2·5252046	3150
3160	1·820	0·2599655	1·7686259	1·543	0·1884693	2·5266084	3160
3170	1·817	0·2593986	1·7696085	1·541	0·1879238	2·5280121	3170
3180	1·815	0·2588337	1·7705911	1·539	0·1873703	2·5294159	3180
3190	1·812	0·2582710	1·7715737	1·538	0·1868389	2·5308196	3190
3200	1·810	0·2577105	1·7725564	1·536	0·1862996	2·5322234	3200
3220	1·805	0·2565957	1·7745216	1·532	0·1852274	2·5350309	3220
3240	1·801	0·2554891	1·7764869	1·528	0·1841633	2·5378384	3240
3260	1·796	0·2543906	1·7784521	1·524	0·1831072	2·5406459	3260
3280	1·792	0·2533002	1·7804174	1·521	0·1820591	2·5434534	3280
3300	1·787	0·2522178	1·7823826	1·517	0·1810190	2·5462609	3300
3320	1·783	0·2511432	1·7843479	1·514	0·1799867	2·5490684	3320
3340	1·779	0·2500763	1·7863131	1·510	0·1789620	2·5518759	3340
3360	1·774	0·2490170	1·7882784	1·506	0·1779449	2·5546834	3360
3380	1·770	0·2479652	1·7902436	1·503	0·1769353	2·5574909	3380
3400	1·766	0·2469210	1·7922089	1·499	0·1759332	2·5602984	3400
3420	1·762	0·2458842	1·7941741	1·496	0·1749385	2·5631059	3420
3440	1·757	0·2448548	1·7961394	1·493	0·1739510	2·5659134	3440
3460	1·753	0·2438325	1·7981046	1·489	0·1729707	2·5687209	3460
3480	1·749	0·2428173	1·8000699	1·486	0·1719974	2·5715284	3480
3500	1·745	0·2418092	1·8020351	1·483	0·1710311	2·5743359	3500
3520	1·741	0·2408080	1·8040004	1·479	0·1700717	2·5771434	3520
3540	1·737	0·2398137	1·8059656	1·476	0·1691191	2·5799509	3540
3560	1·733	0·2388262	1·8079309	1·473	0·1681733	2·5827584	3560
3580	1·729	0·2378455	1·8098961	1·470	0·1672342	2·5855659	3580
3600	1·725	0·2368714	1·8118614	1·467	0·1663017	2·5883734	3600

Sine of Inclination (1 over)	n = 009			n = 010			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
3620	4 207	0 6239070	46641256	3 872	0 5879199	51823618	3620
3640	4 196	0 6228069	46691791	3 862	0 5868282	51879768	3640
3660	4 185	0 6217133	46742326	3 853	0 5857429	51935918	3660
3680	4 175	0 6206262	46792861	3 843	0 5846641	51992068	3680
3700	4 164	0 6195455	46843396	3 833	0 5835917	52048218	3700
3720	4 154	0 6184712	46893931	3 824	0 5825256	52104368	3720
3740	4 144	0 6174031	46944466	3 815	0 5814658	52160518	3740
3760	4 134	0 6163413	46995001	3 806	0 5804123	52216668	3760
3780	4 124	0 6152854	47045536	3 796	0 5793648	52272818	3780
3800	4 114	0 6142357	47096071	3 787	0 5783234	52328968	3800
3820	4 104	0 6131919	47146606	3 778	0 5772879	52385118	3820
3840	4 094	0 6121542	47197141	3 770	0 5762584	52441268	3840
3860	4 084	0 6111223	47247676	3 760	0 5752348	52497418	3860
3880	4 075	0 6100961	47298211	3 752	0 5742169	52553568	3880
3900	4 065	0 6090757	47348746	3 743	0 5732048	52609718	3900
3920	4 056	0 6080609	47399281	3 734	0 5721983	52665868	3920
3940	4 046	0 6070518	47449816	3 726	0 5711975	52722018	3940
3960	4 037	0 6060484	47500351	3 717	0 5702023	52778168	3960
3980	4 028	0 6050505	47550886	3 709	0 5692126	52834318	3980
4000	4 018	0 6040580	47601421	3 700	0 5682284	52890468	4000
4020	4 009	0 6030709	47651956	3 692	0 5672496	52946618	4020
4040	4 000	0 6020892	47702491	3 684	0 5662762	53002768	4040
4060	3 991	0 6011128	47753026	3 675	0 5653080	53058918	4060
4080	3 982	0 6001416	47803561	3 667	0 5643450	53115068	4080
4100	3 974	0 5991756	47854096	3 659	0 5633872	53171218	4100
4120	3 965	0 5982148	47904631	3 651	0 5624346	53227368	4120
4140	3 956	0 5972590	47955166	3 643	0 5614870	53283518	4140
4160	3 947	0 5963083	48005701	3 635	0 5605445	53339668	4160
4180	3 939	0 5953626	48056236	3 627	0 5596070	53395818	4180
4200	3 930	0 5944218	48106771	3 620	0 5586745	53451968	4200
4220	3 922	0 5934859	48157306	3 612	0 5577468	53508118	4220
4240	3 913	0 5925549	48207841	3 604	0 5568241	53564268	4240
4260	3 905	0 5916287	48258376	3 597	0 5559060	53620418	4260
4280	3 897	0 5907072	48308911	3 589	0 5549928	53676568	4280
4300	3 889	0 5897905	48359446	3 582	0 5540843	53732718	4300
4320	3 880	0 5888786	48409981	3 574	0 5531805	53788868	4320
4340	3 872	0 5879712	48460516	3 567	0 5522813	53845018	4340
4360	3 864	0 5870684	48511051	3 559	0 5513867	53901168	4360
4380	3 856	0 5861701	48561586	3 552	0 5504967	53957318	4380
4400	3 848	0 5852764	48612121	3 545	0 5496111	54013468	4400
4420	3 840	0 5843871	48662656	3 538	0 5487299	54069618	4420
4440	3 833	0 5835023	48713191	3 531	0 5478533	54125768	4440
4460	3 825	0 5826219	48763726	3 524	0 5469811	54181918	4460
4480	3 817	0 5817457	48814261	3 517	0 5461131	54238068	4480
4500	3 809	0 5808739	48864796	3 510	0 5452494	54294218	4500
4520	3 802	0 5800063	48915331	3 503	0 5443899	54350368	4520
4540	3 794	0 5791430	48965866	3 496	0 5435348	54406518	4540
4560	3 787	0 5782839	49016401	3 487	0 5426839	54462668	4560
4580	3 779	0 5774289	49066936	3 482	0 5418370	54518818	4580
4600	3 772	0 5765780	49117471	3 475	0 5409943	54574968	4600

Sine of Inclination (1 over)	n = ·035			n = ·050			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
2955	1·871	0·2720797	1·7484821	1·585	0·2001436	2·4978315	2955
2960	1·870	0·2717725	1·7489734	1·584	0·1998472	2·4985334	2960
2965	1·868	0·2714659	1·7494647	1·583	0·1995514	2·4992353	2965
2970	1·867	0·2711600	1·7499560	1·582	0·1992562	2·4999371	2970
2975	1·866	0·2708546	1·7504473	1·581	0·1989616	2·5006390	2975
2980	1·864	0·2705498	1·7509386	1·580	0·1986676	2·5013409	2980
2985	1·863	0·2702456	1·7514299	1·579	0·1983643	2·5020428	2985
2990	1·862	0·2699421	1·7519212	1·578	0·1980816	2·5027446	2990
2995	1·861	0·2696392	1·7524126	1·577	0·1977894	2·5034465	2995
3000	1·859	0·2693369	1·7529039	1·576	0·1974978	2·5041484	3000
3010	1·857	0·2687340	1·7538865	1·574	0·1969165	2·5055521	3010
3020	1·854	0·2681335	1·7548691	1·572	0·1963375	2·5069559	3020
3030	1·852	0·2675353	1·7558517	1·569	0·1957608	2·5083596	3030
3040	1·849	0·2669394	1·7568344	1·567	0·1951864	2·5097634	3040
3050	1·846	0·2663458	1·7578170	1·565	0·1946143	2·5111672	3050
3060	1·844	0·2657546	1·7587996	1·564	0·1940445	2·5125709	3060
3070	1·841	0·2651656	1·7597822	1·561	0·1934770	2·5139746	3070
3080	1·839	0·2645789	1·7607649	1·559	0·1929117	2·5153784	3080
3090	1·837	0·2639944	1·7617475	1·557	0·1923487	2·5167821	3090
3100	1·834	0·2634122	1·7627301	1·555	0·1917879	2·5181859	3100
3110	1·832	0·2628322	1·7637127	1·553	0·1912293	2·5195896	3110
3120	1·829	0·2622545	1·7646954	1·551	0·1906729	2·5209934	3120
3130	1·827	0·2616790	1·7656780	1·549	0·1901188	2·5223971	3130
3140	1·824	0·2611057	1·7666606	1·547	0·1895669	2·5238009	3140
3150	1·822	0·2605345	1·7676432	1·545	0·1890171	2·5252046	3150
3160	1·820	0·2599655	1·7686259	1·543	0·1884693	2·5266084	3160
3170	1·817	0·2593986	1·7696085	1·541	0·1879238	2·5280121	3170
3180	1·815	0·2588337	1·7705911	1·539	0·1873703	2·5294159	3180
3190	1·812	0·2582710	1·7715737	1·538	0·1868389	2·5308196	3190
3200	1·810	0·2577105	1·7725564	1·536	0·1862996	2·5322234	3200
3220	1·805	0·2565957	1·7745216	1·532	0·1852274	2·5350309	3220
3240	1·801	0·2554891	1·7764869	1·528	0·1841633	2·5378384	3240
3260	1·796	0·2543906	1·7784521	1·524	0·1831072	2·5406459	3260
3280	1·792	0·2533002	1·7804174	1·521	0·1820591	2·5434534	3280
3300	1·787	0·2522178	1·7823826	1·517	0·1810190	2·5462609	3300
3320	1·783	0·2511432	1·7843479	1·514	0·1799867	2·5490684	3320
3340	1·779	0·2500763	1·7863131	1·510	0·1789620	2·5518759	3340
3360	1·774	0·2490170	1·7882784	1·506	0·1779449	2·5546834	3360
3380	1·770	0·2479652	1·7902436	1·503	0·1769353	2·5574909	3380
3400	1·766	0·2469210	1·7922089	1·499	0·1759332	2·5602984	3400
3420	1·762	0·2458842	1·7941741	1·496	0·1749385	2·5631059	3420
3440	1·757	0·2448548	1·7961394	1·493	0·1739510	2·5659134	3440
3460	1·753	0·2438325	1·7981046	1·489	0·1729707	2·5687209	3460
3480	1·749	0·2428173	1·8000699	1·486	0·1719974	2·5715284	3480
3500	1·745	0·2418092	1·8020351	1·483	0·1710311	2·5743359	3500
3520	1·741	0·2408080	1·8040004	1·479	0·1700717	2·5771434	3520
3540	1·737	0·2398137	1·8059656	1·476	0·1691191	2·5799509	3540
3560	1·733	0·2388262	1·8079309	1·473	0·1681733	2·5827584	3560
3580	1·729	0·2378455	1·8098961	1·470	0·1672342	2·5855659	3580
3600	1·725	0·2368714	1·8118614	1·467	0·1663017	2·5883734	3600

Sine of Inclination 1 over	n = 009			n = 010			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
3620	4 207	0 6239070	46641206	3 872	0 5879199	51823618	3620
3640	4 196	0 6228069	46691791	3 862	0 5868282	51879768	3640
3660	4 186	0 6217133	46742326	3 853	0 5857429	51935918	3660
3680	4 175	0 6206262	46792861	3 843	0 5846641	51992068	3680
3700	4 164	0 6195455	46843396	3 833	0 5835917	52048218	3700
3720	4 154	0 6184712	46893931	3 824	0 5825256	52104368	3720
3740	4 144	0 6174031	46944466	3 815	0 5814658	52160518	3740
3760	4 134	0 6163413	46995001	3 806	0 5804123	52216668	3760
3780	4 124	0 6152854	47045536	3 796	0 5793648	52272818	3780
3800	4 114	0 6142357	47096071	3 787	0 5783234	52328968	3800
3820	4 104	0 6131919	47146606	3 778	0 5772879	52385118	3820
3840	4 094	0 6121542	47197141	3 770	0 5762584	52441268	3840
3860	4 084	0 6111223	47247676	3 760	0 5752348	52497418	3860
3880	4 075	0 6100961	47298211	3 752	0 5742169	52553568	3880
3900	4 065	0 6090757	47348746	3 743	0 5732048	52609718	3900
3920	4 056	0 6080609	47399281	3 734	0 5721983	52665868	3920
3940	4 046	0 6070518	47449816	3 726	0 5711975	52722018	3940
3960	4 037	0 6060484	47500351	3 717	0 5702023	52778168	3960
3980	4 028	0 6050506	47550886	3 709	0 5692126	52834318	3980
4000	4 018	0 6040580	47601421	3 700	0 5682284	52890468	4000
4020	4 009	0 6030709	47651956	3 692	0 5672496	52946618	4020
4040	4 000	0 6020892	47702491	3 684	0 5662762	53002768	4040
4060	3 991	0 6011128	47753026	3 675	0 5653080	53058918	4060
4080	3 982	0 6001416	47803561	3 667	0 5643450	53115068	4080
4100	3 974	0 5991756	47854096	3 659	0 5633872	53171218	4100
4120	3 965	0 5982148	47904631	3 651	0 5624346	53227368	4120
4140	3 956	0 5972590	47955166	3 643	0 5614870	53283518	4140
4160	3 947	0 5963083	48005701	3 635	0 5605445	53339668	4160
4180	3 939	0 5953626	48056236	3 627	0 5596070	53395818	4180
4200	3 930	0 5944218	48106771	3 620	0 5586745	53451968	4200
4220	3 922	0 5934859	48157306	3 612	0 5577468	53508118	4220
4240	3 913	0 5925549	48207841	3 604	0 5568241	53564268	4240
4260	3 905	0 5916287	48258376	3 597	0 5559060	53620418	4260
4280	3 897	0 5907072	48308911	3 589	0 5549928	53676568	4280
4300	3 889	0 5897905	48359446	3 582	0 5540843	53732718	4300
4320	3 880	0 5888786	48409981	3 574	0 5531805	53788868	4320
4340	3 872	0 5879712	48460516	3 567	0 5522813	53845018	4340
4360	3 864	0 5870684	48511051	3 559	0 5513867	53901168	4360
4380	3 856	0 5861701	48561586	3 552	0 5504967	53957318	4380
4400	3 848	0 5852764	48612121	3 545	0 5496111	54013468	4400
4420	3 840	0 5843871	48662656	3 538	0 5487299	54069618	4420
4440	3 833	0 5835023	48713191	3 531	0 5478533	54125768	4440
4460	3 825	0 5826219	48763726	3 524	0 5469811	54181918	4460
4480	3 817	0 5817457	48814261	3 517	0 5461131	54238068	4480
4500	3 809	0 5808739	48864796	3 510	0 5452494	54294218	4500
4520	3 802	0 5800063	48915331	3 503	0 5443899	54350368	4520
4540	3 794	0 5791430	48965866	3 496	0 5435348	54406518	4540
4560	3 787	0 5782839	49016401	3 487	0 5426838	54462668	4560
4580	3 779	0 5774289	49066936	3 482	0 5418370	54518818	4580
4600	3 772	0 5765780	49117471	3 475	0 5409943	54574968	4600

Sine of Inclination 1 over	n = ·015			n = ·017			Sine of Inclination 1 over
	N	log. N	D	N	log. N	D	
3620	2·868	0·4576327	·77785426	2·632	0·4206246	·88100150	3620
3640	2·861	0·4563776	·77819651	2·626	0·4192821	·88195605	3640
3660	2·854	0·4551289	·77903876	2·620	0·4182461	·88291060	3660
3680	2·848	0·4544867	·77988101	2·613	0·4172166	·88386515	3680
3700	2·841	0·4534509	·78072326	2·607	0·4161934	·88481970	3700
3720	2·834	0·4524214	·78156551	2·601	0·4151765	·88577425	3720
3740	2·827	0·4513981	·78240776	2·595	0·4141659	·88672880	3740
3760	2·821	0·4503810	·78325001	2·589	0·4131614	·88768335	3760
3780	2·814	0·4493700	·78409226	2·583	0·4121630	·88863790	3780
3800	2·808	0·4483650	·78493451	2·577	0·4111706	·88959245	3800
3820	2·801	0·4473659	·78577676	2·571	0·4101841	·89054700	3820
3840	2·795	0·4463729	·78661901	2·566	0·4092036	·89150155	3840
3860	2·789	0·4453857	·78746126	2·560	0·4082290	·89245610	3860
3880	2·782	0·4444042	·78830351	2·554	0·4072601	·89341065	3880
3900	2·776	0·4434283	·78914576	2·549	0·4062969	·89436520	3900
3920	2·770	0·4424582	·78998801	2·543	0·4053393	·89531975	3920
3940	2·764	0·4414937	·79083026	2·537	0·4043873	·89627430	3940
3960	2·758	0·4405348	·79167251	2·532	0·4034409	·89722885	3960
3980	2·752	0·4395814	·79251476	2·526	0·4025000	·89818340	3980
4000	2·746	0·4386334	·79335701	2·521	0·4015646	·89913795	4000
4020	2·740	0·4376908	·79419926	2·516	0·4006345	·90009250	4020
4040	2·734	0·4367536	·79504151	2·510	0·3997097	·90104705	4040
4060	2·728	0·4358216	·79588376	2·505	0·3987902	·90200160	4060
4080	2·722	0·4348948	·79672601	2·500	0·3978759	·90295615	4080
4100	2·716	0·4339731	·79756826	2·494	0·3969667	·90391070	4100
4120	2·711	0·4330566	·79841051	2·489	0·3960626	·90486525	4120
4140	2·705	0·4321451	·79925276	2·484	0·3951636	·90581980	4140
4160	2·699	0·4312387	·80009501	2·479	0·3942697	·90677435	4160
4180	2·694	0·4303373	·80093726	2·474	0·3933807	·90772890	4180
4200	2·688	0·4294408	·80177951	2·469	0·3924966	·90868345	4200
4220	2·683	0·4285491	·80262176	2·464	0·3916174	·90963800	4220
4240	2·677	0·4276623	·80346401	2·459	0·3907431	·91059255	4240
4260	2·672	0·4267803	·80430626	2·454	0·3898735	·91154710	4260
4280	2·666	0·4259031	·80514851	2·449	0·3890086	·91250165	4280
4300	2·661	0·4250305	·80599076	2·444	0·3881484	·91345620	4300
4320	2·656	0·4241626	·80683301	2·439	0·3872929	·91441075	4320
4340	2·650	0·4232993	·80767526	2·435	0·3864420	·91536530	4340
4360	2·645	0·4224405	·80851751	2·430	0·3855956	·91631985	4360
4380	2·640	0·4215863	·80935976	2·425	0·3847538	·91727440	4380
4400	2·635	0·4207366	·81020201	2·421	0·3839164	·91822895	4400
4420	2·630	0·4198913	·81104426	2·416	0·3830834	·91918350	4420
4440	2·625	0·4190505	·81188651	2·411	0·3822549	·92013805	4440
4460	2·619	0·4182140	·81272876	2·407	0·3814307	·92109260	4460
4480	2·614	0·4173818	·81357101	2·402	0·3806108	·92204715	4480
4500	2·609	0·4165538	·81441326	2·398	0·3797952	·92300170	4500
4520	2·605	0·4157301	·81525551	2·393	0·3789838	·92395625	4520
4540	2·600	0·4149106	·81609776	2·389	0·3781766	·92491080	4540
4560	2·595	0·4140953	·81694001	2·384	0·3773735	·92586535	4560
4580	2·590	0·4132842	·81778226	2·380	0·3765747	·92681990	4580
4600	2·585	0·4124771	·81862451	2·376	0·3757798	·92777445	4600

Sine of Inclination Lower	n = 020			n = 0225			Sine of Inclination Lower
	N	log N	D	N	log N	D	
8620	2 367	0 3741248	1 0361721	2 199	0 3422941	1 1660314	8620
8640	2 361	0 3730097	1 0375954	2 194	0 3412819	1 1672948	8640
8660	2 355	0 3720810	1 0387184	2 189	0 3402762	1 1685781	8660
8680	2 350	0 3710687	1 0398411	2 184	0 3392769	1 1698215	8680
8700	2 345	0 3700627	1 0409644	2 179	0 3382839	1 1710849	8700
8720	2 339	0 3690630	1 0420874	2 174	0 3372972	1 1723483	8720
8740	2 334	0 3680696	1 0432101	2 169	0 3363168	1 1736116	8740
8760	2 329	0 3670823	1 0443331	2 164	0 3353425	1 1748750	8760
8780	2 323	0 3661010	1 0454561	2 160	0 3343742	1 1761384	8780
8800	2 318	0 3651258	1 0465791	2 155	0 3334110	1 1774018	8800
8820	2 313	0 3641566	1 0477021	2 150	0 3324575	1 1786651	8820
8840	2 308	0 3631932	1 0488254	2 145	0 3315031	1 1799285	8840
8860	2 303	0 3622357	1 0499484	2 141	0 3305601	1 1811919	8860
8880	2 298	0 3612839	1 0510714	2 136	0 3296215	1 1824553	8880
8900	2 293	0 3603378	1 0521944	2 132	0 3286882	1 1837186	8900
8920	2 288	0 3593973	1 0533174	2 127	0 3277606	1 1849820	8920
8940	2 283	0 3584624	1 0544404	2 122	0 3268385	1 1862454	8940
8960	2 278	0 3575330	1 0555634	2 118	0 3259221	1 1875088	8960
8980	2 273	0 3566092	1 0566864	2 114	0 3250111	1 1887721	8980
9000	2 268	0 3556908	1 0578094	2 109	0 3241056	1 1900355	9000
9020	2 263	0 3547778	1 0589324	2 105	0 3232054	1 1912989	9020
9040	2 259	0 3538701	1 0600554	2 100	0 3223105	1 1925623	9040
9060	2 254	0 3529676	1 0611784	2 096	0 3214208	1 1938256	9060
9080	2 249	0 3520702	1 0623014	2 092	0 3205362	1 1950890	9080
9100	2 245	0 3511780	1 0634244	2 088	0 3196568	1 1963524	9100
9120	2 240	0 3502909	1 0645474	2 083	0 3187824	1 1976158	9120
9140	2 236	0 3494089	1 0656704	2 079	0 3179132	1 1988791	9140
9160	2 231	0 3485319	1 0667934	2 075	0 3170489	1 2001425	9160
9180	2 227	0 3476599	1 0679164	2 071	0 3161895	1 2014059	9180
9200	2 222	0 3467927	1 0690394	2 067	0 3153351	1 2026693	9200
9220	2 218	0 3459304	1 0701624	2 063	0 3144856	1 2039326	9220
9240	2 214	0 3450729	1 0712854	2 059	0 3136408	1 2051960	9240
9260	2 209	0 3442202	1 0724084	2 055	0 3128008	1 2064594	9260
9280	2 205	0 3433721	1 0735314	2 051	0 3119654	1 2077228	9280
9300	2 201	0 3425289	1 0746544	2 047	0 3111348	1 2089861	9300
9320	2 196	0 3416902	1 0757774	2 043	0 3103088	1 2102495	9320
9340	2 192	0 3408561	1 0769004	2 039	0 3094874	1 2115129	9340
9360	2 188	0 3400266	1 0780234	2 035	0 3086705	1 2127763	9360
9380	2 184	0 3392016	1 0791464	2 032	0 3078581	1 2140396	9380
9400	2 180	0 3383810	1 0802694	2 028	0 3070501	1 2153030	9400
9420	2 176	0 3375648	1 0813924	2 024	0 3062465	1 2165664	9420
9440	2 171	0 3367530	1 0825154	2 020	0 3054474	1 2178298	9440
9460	2 167	0 3359456	1 0836384	2 017	0 3046526	1 2190931	9460
9480	2 163	0 3351425	1 0847614	2 013	0 3038623	1 2203565	9480
9500	2 159	0 3343436	1 0858844	2 009	0 3030762	1 2216199	9500
9520	2 155	0 3335489	1 0870074	2 006	0 3022945	1 2228833	9520
9540	2 151	0 3327584	1 0881304	2 002	0 3015170	1 2241467	9540
9560	2 148	0 3319721	1 0892534	1 999	0 3007437	1 2254100	9560
9580	2 144	0 3311899	1 0903764	1 995	0 2999747	1 2266734	9580
9600	2 140	0 3304117	1 0914994	1 992	0 2992098	1 2279368	9600

VALUES OF N, LOG N, AND D

Sine of Inclination (1 over)	n = ·0250			n = ·0275			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
3620	2·066	0·3150352	1·2955904	1·956	0·2913853	1·4251495	3620
3640	2·061	0·3140349	1·2969942	1·952	0·2902960	1·4266936	3640
3660	2·056	0·3130412	1·2983979	1·947	0·2894131	1·4282377	3660
3680	2·051	0·3120538	1·2998017	1·943	0·2884367	1·4297819	3680
3700	2·017	0·3110726	1·3012054	1·939	0·2874666	1·4313260	3700
3720	2·042	0·3100978	1·3026092	1·934	0·2865028	1·4328701	3720
3740	2·038	0·3091293	1·3040129	1·930	0·2855451	1·4344142	3740
3760	2·033	0·3081669	1·3054167	1·926	0·2845936	1·4359584	3760
3780	2·029	0·3072104	1·3068204	1·922	0·2836480	1·4375025	3780
3800	2·024	0·3062600	1·3082242	1·917	0·2827084	1·4390466	3800
3820	2·020	0·3053155	1·3096279	1·913	0·2817748	1·4405907	3820
3840	2·015	0·3043769	1·3110317	1·909	0·2808471	1·4421349	3840
3860	2·011	0·3034441	1·3124354	1·905	0·2799252	1·4436790	3860
3880	2·007	0·3025170	1·3138392	1·901	0·2790090	1·4452231	3880
3900	2·003	0·3015955	1·3152429	1·897	0·2780983	1·4467672	3900
3920	1·998	0·3006797	1·3166467	1·893	0·2771933	1·4483114	3920
3940	1·994	0·2997694	1·3180504	1·889	0·2762939	1·4498555	3940
3960	1·990	0·2988646	1·3194542	1·885	0·2754000	1·4513996	3960
3980	1·986	0·2979655	1·3208579	1·882	0·2745116	1·4529437	3980
4000	1·982	0·2970716	1·3222617	1·878	0·2736285	1·4544879	4000
4020	1·978	0·2961831	1·3236654	1·874	0·2727508	1·4560320	4020
4040	1·974	0·2953000	1·3250692	1·870	0·2718784	1·4575761	4040
4060	1·970	0·2944220	1·3264729	1·866	0·2710112	1·4591202	4060
4080	1·966	0·2935492	1·3278767	1·863	0·2701491	1·4606644	4080
4100	1·962	0·2926814	1·3292804	1·859	0·2692921	1·4622085	4100
4120	1·958	0·2918188	1·3306842	1·855	0·2684403	1·4637526	4120
4140	1·954	0·2909612	1·3320879	1·852	0·2675934	1·4652967	4140
4160	1·950	0·2901086	1·3334917	1·848	0·2667515	1·4668409	4160
4180	1·947	0·2892609	1·3348954	1·845	0·2659145	1·4683850	4180
4200	1·943	0·2884181	1·3362992	1·841	0·2650824	1·4699291	4200
4220	1·939	0·2875801	1·3377029	1·838	0·2642551	1·4714732	4220
4240	1·935	0·2867470	1·3391067	1·834	0·2634327	1·4730174	4240
4260	1·932	0·2859186	1·3405104	1·831	0·2626149	1·4745615	4260
4280	1·928	0·2850949	1·3419142	1·827	0·2618019	1·4761056	4280
4300	1·924	0·2842759	1·3433179	1·824	0·2609935	1·4776497	4300
4320	1·921	0·2834615	1·3447217	1·820	0·2601897	1·4791939	4320
4340	1·917	0·2826516	1·3461254	1·817	0·2593905	1·4807380	4340
4360	1·914	0·2818462	1·3475292	1·814	0·2585958	1·4822821	4360
4380	1·910	0·2810453	1·3489329	1·811	0·2578055	1·4838262	4380
4400	1·907	0·2802489	1·3503367	1·807	0·2570196	1·4853704	4400
4420	1·903	0·2794569	1·3517404	1·804	0·2562383	1·4869145	4420
4440	1·900	0·2786693	1·3531442	1·801	0·2554612	1·4884586	4440
4460	1·896	0·2778861	1·3545479	1·798	0·2546885	1·4900027	4460
4480	1·893	0·2771070	1·3559517	1·794	0·2539200	1·4915469	4480
4500	1·889	0·2763321	1·3573554	1·791	0·2531556	1·4930910	4500
4520	1·886	0·2755614	1·3587592	1·788	0·2523956	1·4946351	4520
4540	1·883	0·2747950	1·3601629	1·785	0·2516396	1·4961792	4540
4560	1·879	0·2740327	1·3615667	1·782	0·2508879	1·4977234	4560
4580	1·876	0·2732745	1·3629704	1·779	0·2501402	1·4992675	4580
4600	1·873	0·2725203	1·3642742	1·776	0·2493965	1·5008116	4600

Sine of Inclination (1 over)	n = 030			n = 035			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
3620	1 865	0 2706429	1 5547085	1 721	0 2359038	1 8138266	3620
3640	1 861	0 2696638	1 5563930	1 718	0 2349428	1 8157919	3640
3660	1 856	0 2686911	1 5580775	1 714	0 2339882	1 8177571	3660
3680	1 852	0 2677248	1 5597620	1 710	0 2330399	1 8197224	3680
3700	1 848	0 2667647	1 5614465	1 706	0 2320979	1 8216876	3700
3720	1 844	0 2658109	1 5631310	1 703	0 2311622	1 8236529	3720
3740	1 840	0 2648635	1 5648155	1 699	0 2302326	1 8256181	3740
3760	1 836	0 2639220	1 5665000	1 696	0 2293091	1 8275834	3760
3780	1 832	0 2629865	1 5681845	1 692	0 2283916	1 8295486	3780
3800	1 828	0 2620570	1 5698690	1 688	0 2274801	1 8315139	3800
3820	1 824	0 2611334	1 5715535	1 685	0 2265744	1 8334791	3820
3840	1 821	0 2602157	1 5732380	1 681	0 2256746	1 8354444	3840
3860	1 817	0 2593038	1 5749225	1 678	0 2247806	1 8374096	3860
3880	1 813	0 2583976	1 5766070	1 675	0 2238922	1 8393749	3880
3900	1 809	0 2574970	1 5782915	1 671	0 2230094	1 8413401	3900
3920	1 806	0 2566020	1 5799760	1 668	0 2221322	1 8433054	3920
3940	1 802	0 2557126	1 5816605	1 664	0 2212606	1 8452706	3940
3960	1 798	0 2548286	1 5833450	1 661	0 2203945	1 8472359	3960
3980	1 795	0 2539501	1 5850295	1 658	0 2195338	1 8492011	3980
4000	1 791	0 2530771	1 5867140	1 655	0 2186785	1 8511664	4000
4020	1 787	0 2522094	1 5883985	1 651	0 2178285	1 8531316	4020
4040	1 784	0 2513470	1 5900830	1 648	0 2169838	1 8550969	4040
4060	1 780	0 2504897	1 5917675	1 645	0 2161442	1 8570621	4060
4080	1 777	0 2496374	1 5934520	1 642	0 2153096	1 8590274	4080
4100	1 773	0 2487903	1 5951365	1 639	0 2144802	1 8609926	4100
4120	1 770	0 2479483	1 5968210	1 636	0 2136559	1 8629579	4120
4140	1 766	0 2471113	1 5985055	1 632	0 2128365	1 8649231	4140
4160	1 763	0 2462793	1 6001900	1 629	0 2120221	1 8668884	4160
4180	1 760	0 2454522	1 6018745	1 626	0 2112126	1 8688536	4180
4200	1 756	0 2446299	1 6035590	1 623	0 2104080	1 8708189	4200
4220	1 753	0 2438125	1 6052435	1 620	0 2096081	1 8727841	4220
4240	1 750	0 2429999	1 6069280	1 617	0 2088130	1 8747494	4240
4260	1 747	0 2421919	1 6086125	1 614	0 2080226	1 8767146	4260
4280	1 743	0 2413887	1 6102970	1 612	0 2072369	1 8786799	4280
4300	1 740	0 2405903	1 6119815	1 609	0 2064558	1 8806451	4300
4320	1 737	0 2397963	1 6136660	1 606	0 2056793	1 8826104	4320
4340	1 734	0 2390069	1 6153505	1 603	0 2049073	1 8845756	4340
4360	1 731	0 2382219	1 6170350	1 600	0 2041397	1 8865409	4360
4380	1 728	0 2374414	1 6187195	1 597	0 2033767	1 8885061	4380
4400	1 725	0 2366654	1 6204040	1 594	0 2026181	1 8904714	4400
4420	1 721	0 2358936	1 6220885	1 592	0 2018638	1 8924366	4420
4440	1 718	0 2351263	1 6237730	1 589	0 2011138	1 8944019	4440
4460	1 715	0 2343633	1 6254575	1 586	0 2003682	1 8963671	4460
4480	1 712	0 2336046	1 6271420	1 584	0 1996267	1 8983324	4480
4500	1 709	0 2328500	1 6288265	1 581	0 1988894	1 9002976	4500
4520	1 706	0 2320996	1 6305110	1 578	0 1981563	1 9022629	4520
4540	1 704	0 2313534	1 6321955	1 576	0 1974274	1 9042281	4540
4560	1 701	0 2306113	1 6338800	1 573	0 1967026	1 9061934	4560
4580	1 698	0 2298733	1 6355645	1 570	0 1959818	1 9081586	4580
4600	1 695	0 2291392	1 6372490	1 568	0 1952650	1 9101239	4600

Sine of Inclination (1 over)	n = ·012			n = ·013			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
4620	3·024	0·4806488	·65557341	2·854	0·4553995	·71020453	4620
4640	3·019	0·4798094	·65624721	2·848	0·4545872	·71093448	4640
4660	3·012	0·4789142	·65692101	2·843	0·4537790	·71166443	4660
4680	3·007	0·4781929	·65759481	2·838	0·4529747	·71239438	4680
4700	3·002	0·4773954	·65826861	2·833	0·4521743	·71312433	4700
4720	2·996	0·4765918	·65894241	2·827	0·4513778	·71385428	4720
4740	2·991	0·4757920	·65961621	2·822	0·4505851	·71458423	4740
4760	2·985	0·4749961	·66029001	2·817	0·4497963	·71531418	4760
4780	2·980	0·4742041	·66096381	2·812	0·4490114	·71604413	4780
4800	2·975	0·4734158	·66163761	2·807	0·4482302	·71677408	4800
4820	2·969	0·4726312	·66231141	2·802	0·4474527	·71750403	4820
4840	2·964	0·4718503	·66298521	2·797	0·4466788	·71823398	4840
4860	2·959	0·4710730	·66365901	2·792	0·4459086	·71896393	4860
4880	2·953	0·4702994	·66433281	2·787	0·4451421	·71969388	4880
4900	2·948	0·4695295	·66500661	2·782	0·4443792	·72042383	4900
4920	2·943	0·4687632	·66568041	2·777	0·4436199	·72115378	4920
4940	2·938	0·4680004	·66635421	2·772	0·4428642	·72188373	4940
4960	2·933	0·4672411	·66702801	2·768	0·4421119	·72261368	4960
4980	2·927	0·4664853	·66770181	2·763	0·4413631	·72334363	4980
5000	2·922	0·4657330	·66837561	2·758	0·4406178	·72407358	5000
5040	2·912	0·4642386	·66972321	2·749	0·4391375	·72553348	5040
5120	2·893	0·4612905	·67241841	2·730	0·4362174	·72845328	5120
5200	2·873	0·4583948	·67511361	2·712	[illegible]3497	·73137308	5200
[illegible]	[illegible]	[illegible]	[illegible]	2·697	[illegible]328	·73429288	5280

Sine of Inclination 1 over	n = 014			n = 015			Sine of Inclination 1 over
	N	log N	D	N	log N	D	
4620	2 707	0 432o237	76483o65	2 580	0 4116740	81946676	4620
4640	2 702	0 4317182	76o62175	2 o76	0 41087o1	82030901	4640
4660	2 697	0 4309168	76640785	2 571	0 4100802	82115126	4660
4680	2 692	0 4301193	7671939o	2 566	0 4092892	82199351	4680
4700	2 687	0 429326o7	7679800o	2 562	0 4085020	82283o76	4700
4720	2 684	0 42853o9	76876615	2 557	0 4077188	82367801	4720
4740	2 678	0 4277o00	769o522o	2 552	0 4069394	82452026	4740
4760	2 673	0 4269680	77033835	2 548	0 4061639	825362o1	4760
4780	2 668	0 4261899	77112445	2 543	0 40o3922	82620476	4780
4800	2 663	0 4254155	771910o5	2 539	0 4046242	82704701	4800
4820	2 659	0 4246447	77269665	2 534	0 4038599	82788926	4820
4840	2 6o4	0 4238775	77348275	2 530	0 4030993	82873151	4840
4860	2 649	0 4231141	77426885	2 525	0 4023423	829o7376	4860
4880	2 645	0 4223543	7750o49o	2 521	0 4015890	83041601	4880
4900	2 640	0 4215982	7758410o	2 517	0 4008394	8312o826	4900
4920	2 635	0 4208457	77662715	2 512	0 4000933	832100o1	4920
4940	2 631	0 4200967	77741325	2 508	0 3993507	83294276	4940
4960	2 626	0 4193512	7781993o	2 504	0 3986116	83378o01	4960
4980	2 622	0 4186091	77898545	2 500	0 3978760	83462726	4980
5000	2 617	0 417870o	77977155	2 495	0 3971439	83o469o1	5000
5040	2 609	0 4164037	78134375	2 487	0 3956899	83715401	5040
5120	2 591	0 4135104	78448815	2 471	0 3928223	840o2301	5120
5200	2 574	0 4106694	787632oo	2 455	0 3900070	84389201	5200
5280	2 558	0 4078792	7907769o	2 439	0 3872424	84726101	5280
5360	2 542	0 405o1383	79392135	2 424	0 3845270	8so63001	5360
5440	2 596	0 4024452	79706o7o	2 409	0 3818o73	85399901	5440
5520	2 511	0 3997983	80021015	2 395	0 3792378	8o736801	5520
5600	2 196	0 3971964	80335455	2 380	0 3766612	86073701	5600
5680	2 481	0 3946381	8o64989o	2 367	0 3741282	86410601	5680
5760	2 467	0 3921224	8096433o	2 353	0 3716376	86747501	5760
5840	2 453	0 3896479	8127877 ›	2 340	0 3691884	87084401	5840
5920	2 439	0 3872135	81593215	2 327	0 3667791	87421301	5920
6000	2 426	0 3848182	8190765	2 314	0 3644088	877o8201	6000
6080	2 412	0 3824609	82222095	2 302	0 3620764	8809o101	6080
6160	2 400	0 3801406	82536o35	2 290	0 3597809	8843?001	6160
6240	2 387	0 3778o63	8285o975	2 278	0 3o75214	88768901	6240
6320	2 375	0 3756071	83165415	2 266	0 3oo2970	8910 801	6320
6400	2 363	0 3733921	8347985	2 2o5	0 3o31067	89442701	6400
6480	2 3o1	0 3712103	83794295	2 244	0 3o09496	89779601	6480
6560	2 339	0 3690610	8410873 ›	2 233	0 3488249	90116501	6560
6640	2 328	0 36691o ›	8442317o	2 222	0 3467319	904 3401	6640
6720	2 317	0 3648 69	84737615	2 211	0 3446697	90790301	6720
6800	2 306	0 6 8003	8 o 20 5	2 201	0 3426377	91127201	6800
6880	2 295	0 36077 1	8 36649o	2 191	0 34063o0	91464101	6880
6960	2 284	0 3 877 1	8o68093o	2 181	0 3386611	91801001	6960
7040	2 279	0 3 7786 ›	8 8 9155	2 176	0 3376845 ›	91969o1	7040
7120	2 264	0 3 68018	8 99o75	2 171	0 3 671o1	92137901	7120
7200	2 2o4	0 3 48619	86 09815	2 162	0 3347964	92474801	7200
7280	2 244	0 3 2460	8662127	2 152	0 3329046	92811701	7280
		0 3 10 62	8693809	2 143	0 3 10388	93148601	

VALUES OF N, LOG N, AND D

Sine of Inclination (1 over)	n = ·017			n = ·020			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
4620	2·371	0·3749891	·92872900	2·136	0·3296376	1·0926224	4620
4640	2·367	0·3742024	·92968355	2·132	0·3288675	1·0937454	4640
4660	2·363	0·3734197	·93063810	2·129	0·3281015	1·0948684	4660
4680	2·359	0·3726410	·93159265	2·125	0·3273394	1·0959914	4680
4700	2·354	0·3718661	·93254720	2·121	0·3265811	1·0971144	4700
4720	2·350	0·3710950	·93350175	2·118	0·3258266	1·0982374	4720
4740	2·346	0·3703278	·93445630	2·114	0·3250760	1·0993604	4740
4760	2·342	0·3695645	·93541085	2·110	0·3243292	1·1004834	4760
4780	2·338	0·3688050	·93636540	2·107	0·3235863	1·1016064	4780
4800	2·334	0·3680492	·93731995	2·103	0·3228471	1·1027294	4800
4820	2·330	0·3672971	·93827450	2·099	0·3221115	1·1038524	4820
4840	2·326	0·3665487	·93922905	2·096	0·3213796	1·1049754	4840
4860	2·322	0·3658039	·94018360	2·092	0·3206513	1·1060984	4860
4880	2·317	0·3649627	·94113815	2·089	0·3199267	1·1072214	4880
4900	2·314	0·3643252	·94209270	2·085	0·3192057	1·1083444	4900
4920	2·310	0·3635912	·94304725	2·082	0·3184881	1·1094674	4920
4940	2·306	0·3628608	·94400180	2·079	0·3177742	1·1105904	4940
4960	2·302	0·3621338	·94495635	2·075	0·3170637	1·1117134	4960
4980	2·298	0·3614103	·94591090	2·072	0·3163566	1·1128364	4980
5000	2·295	0·3606903	·94686545	2·068	0·3156530	1·1139594	5000
5040	2·287	0·3592606	·94877455	2·062	0·3142560	1·1162054	5040
5120	2·272	0·3564412	·95259275	2·049	0·3115022	1·1206974	5120
5200	2·258	0·3536740	·95641095	2·036	0·3088004	1·1251894	5200
5280	2·244	0·3509574	·96022915	2·024	0·3061489	1·1296814	5280
5360	2·230	0·3482899	·96404735	2·012	0·3035463	1·1341734	5360
5440	2·217	0·3456700	·96786555	2·000	0·3009911	1·1386654	5440
5520	2·203	0·3430962	·97168375	1·988	0·2984818	1·1431574	5520
5600	2·191	0·3405671	·97550195	1·977	0·2960171	1·1476494	5600
5680	2·178	0·3380815	·97932015	1·966	0·2935957	1·1521414	5680
5760	2·166	0·3356382	·98313835	1·955	0·2912164	1·1566334	5760
5840	2·154	0·3332361	·98695655	1·945	0·2888781	1·1611254	5840
5920	2·142	0·3308738	·99077475	1·935	0·2865794	1·1656174	5920
6000	2·131	0·3285504	·99459295	1·925	0·2843195	1·1701094	6000
6080	2·120	0·3262648	·99841115	1·915	0·2820972	1·1746014	6080
6160	2·109	0·3240160	1·0022293	1·905	0·2799114	1·1790934	6160
6240	2·098	0·3218030	1·0060475	1·896	0·2777614	1·1835854	6240
6320	2·087	0·3196249	1·0098657	1·886	0·2756461	1·1880774	6320
6400	2·077	0·3174809	1·0136839	1·877	0·2735646	1·1925694	6400
6480	2·067	0·3153700	1·0175021	1·869	0·2715160	1·1970614	6480
6560	2·057	0·3132914	1·0213203	1·860	0·2694996	1·2015534	6560
6640	2·048	0·3112443	1·0251385	1·851	0·2675145	1·2060454	6640
6720	2·038	0·3092279	1·0289567	1·843	0·2655600	1·2105374	6720
6800	2·029	0·3072415	1·0327749	1·835	0·2636353	1·2150294	6800
6880	2·020	0·3052844	1·0365931	1·827	0·2617397	1·2195214	6880
6960	2·011	0·3033559	1·0404113	1·819	0·2598725	1·2240134	6960
7000	2·006	0·3024021	1·0423204	1·815	0·2589493	1·2262594	7000
7040	2·002	0·3014552	1·0442295	1·811	0·2580330	1·2285054	7040
7120	1·993	0·2995818	1·0480477	1·804	0·2562205	1·2329974	7120
7200	1·985	0·2977350	1·0518659	1·797	0·2544345	1·2374894	7200
7280	1·977	0·2959144	1·0556841	1·789	0·2526745	1·2419814	7280

Sine of Inclination (1 over)	n = 0225			n = 0250			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
4620	1 988	0 2984449	1 2292001	1 870	0 2717701	1 3657779	4620
4640	1 985	0 2976874	1 2304635	1 866	0 2710240	1 3671817	4640
4660	1 981	0 2969338	1 2317269	1 863	0 2702819	1 3685854	4660
4680	1 978	0 2961841	1 2329903	1 860	0 2695437	1 3699892	4680
4700	1 974	0 2954383	1 2342536	1 857	0 2688092	1 3713929	4700
4720	1 971	0 2946964	1 2355170	1 854	0 2680786	1 3727967	4720
4740	1 968	0 2939582	1 2367804	1 851	0 2673518	1 3742004	4740
4760	1 964	0 2932239	1 2380438	1 848	0 2666288	1 3756042	4760
4780	1 961	0 2924934	1 2393071	1 845	0 2659096	1 3770079	4780
4800	1 958	0 2917666	1 2405705	1 842	0 2651942	1 3784117	4800
4820	1 955	0 2910434	1 2418339	1 839	0 2644824	1 3798154	4820
4840	1 951	0 2903238	1 2430973	1 836	0 2637743	1 3812192	4840
4860	1 948	0 2896079	1 2443606	1 833	0 2630698	1 3826229	4860
4880	1 945	0 2888957	1 2456240	1 830	0 2623688	1 3840267	4880
4900	1 942	0 2881871	1 2468874	1 827	0 2616714	1 3854304	4900
4920	1 939	0 2874820	1 2481508	1 824	0 2609775	1 3868342	4920
4940	1 935	0 2867804	1 2494141	1 821	0 2602872	1 3882379	4940
4960	1 932	0 2860822	1 2506775	1 818	0 2596003	1 3896417	4960
4980	1 929	0 2853874	1 2519409	1 815	0 2589168	1 3910454	4980
5000	1 926	0 2846961	1 2532043	1 812	0 2582368	1 3924492	5000
5040	1 920	0 2833238	1 2557310	1 807	0 2568870	1 3952567	5040
5120	1 908	0 2806191	1 2607845	1 796	0 2542271	1 4008717	5120
5200	1 897	0 2779662	1 2658380	1 785	0 2516188	1 4064867	5200
5280	1 885	0 2753636	1 2709915	1 774	0 2490607	1 4121017	5280
5360	1 874	0 2728097	1 2759450	1 764	0 2465512	1 4177167	5360
5440	1 863	0 2703030	1 2810985	1 754	0 2440888	1 4233317	5440
5520	1 853	0 2678420	1 2860520	1 745	0 2416719	1 4289467	5520
5600	1 843	0 2654255	1 2911055	1 735	0 2392993	1 4345617	5600
5680	1 833	0 2630521	1 2961590	1 726	0 2369697	1 4401767	5680
5760	1 823	0 2607208	1 3012125	1 717	0 2346820	1 4457917	5760
5840	1 813	0 2584302	1 3062660	1 708	0 2324348	1 4514067	5840
5920	1 804	0 2561791	1 3113195	1 699	0 2302271	1 4570217	5920
6000	1 795	0 2539666	1 3163730	1 691	0 2280578	1 4626367	6000
6080	1 786	0 2517915	1 3214265	1 682	0 2259259	1 4682517	6080
6160	1 777	0 2496529	1 3264800	1 674	0 2238302	1 4738667	6160
6240	1 768	0 2475499	1 3315335	1 666	0 2217699	1 4794817	6240
6320	1 760	0 2454815	1 3365870	1 659	0 2197441	1 4850967	6320
6400	1 752	0 2434467	1 3416405	1 651	0 2177518	1 4907117	6400
6480	1 744	0 2414447	1 3466940	1 644	0 2157922	1 4963267	6480
6560	1 736	0 2394747	1 3517475	1 636	0 2138644	1 5019417	6560
6640	1 728	0 2375359	1 3568010	1 629	0 2119676	1 5075567	6640
6720	1 720	0 2356274	1 3618545	1 622	0 2101012	1 5131717	6720
6800	1 713	0 2337485	1 3669080	1 615	0 2082643	1 5187867	6800
6880	1 706	0 2318991	1 3719615	1 609	0 2064563	1 5244017	6880
6960	1 698	0 2300776	1 3770150	1 602	0 2046763	1 5300167	6960
7000	1 695	0 2291771	1 3795418	1 599	0 2037965	1 5328242	7000
7040	1 692	0 2282836	1 3820685	1 596	0 2029237	1 5356317	7040
7120	1 685	0 2265165	1 3871220	1 589	0 2011979	1 5412467	7120
7200	1 678	0 2247759	1 3921755	1 583	0 1994985	1 5468617	7200
7280	1 671	0 2230610	1 3972290	1 577	0 1978246	1 5524767	7280

VALUES OF N, LOG N, AND D

Sine of Inclination (1 over)	n = ·0275			n = ·030			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
4620	1·773	0·2486568	1·5023557	1·692	0·2284092	1·6389335	4620
4640	1·770	0·2479211	1·5038999	1·689	0·2276832	1·6406180	4640
4660	1·767	0·2471895	1·5054440	1·686	0·2269612	1·6423025	4660
4680	1·764	0·2464617	1·5069881	1·684	0·2262431	1·6439870	4680
4700	1·761	0·2457377	1·5085322	1·681	0·2255288	1·6456715	4700
4720	1·758	0·2450176	1·5100764	1·678	0·2248182	1·6473560	4720
4740	1·755	0·2443013	1·5116205	1·675	0·2241114	1·6490405	4740
4760	1·752	0·2435888	1·5131646	1·673	0·2234085	1·6507250	4760
4780	1·749	0·2428800	1·5147087	1·670	0·2227094	1·6524095	4780
4800	1·747	0·2421747	1·5162529	1·667	0·2220140	1·6540940	4800
4820	1·744	0·2414735	1·5177970	1·665	0·2213221	1·6557785	4820
4840	1·741	0·2407757	1·5193411	1·662	0·2206338	1·6574630	4840
4860	1·738	0·2400816	1·5208852	1·659	0·2199492	1·6591475	4860
4880	1·735	0·2393910	1·5224294	1·657	0·2192682	1·6608320	4880
4900	1·733	0·2387040	1·5239735	1·654	0·2185907	1·6625165	4900
4920	1·730	0·2380205	1·5255176	1·652	0·2179167	1·6642010	4920
4940	1·727	0·2373405	1·5270617	1·649	0·2172463	1·6658855	4940
4960	1·725	0·2366640	1·5286059	1·646	0·2165592	1·6675700	4960
4980	1·722	0·2359908	1·5301500	1·644	0·2159156	1·6692545	4980
5000	1·719	0·2353211	1·5316941	1·642	0·2152554	1·6709390	5000
5040	1·714	0·2339919	1·5347824	1·637	0·2139451	1·6743080	5040
5120	1·704	0·2313731	1·5409589	1·627	0·2113641	1·6810460	5120
5200	1·694	0·2288058	1·5471354	1·617	0·2088345	1·6877840	5200
5280	1·684	0·2262885	1·5533119	1·608	0·2063546	1·6945220	5280
5360	1·674	0·2238196	1·5594884	1·599	0·2039231	1·7012600	5360
5440	1·665	0·2213976	1·5656649	1·591	0·2015384	1·7079980	5440
5520	1·656	0·2190211	1·5718414	1·582	0·1991990	1·7147360	5520
5600	1·647	0·2166888	1·5780178	1·574	0·1969036	1·7214740	5600
5680	1·638	0·2143993	1·5841944	1·565	0·1946510	1·7282120	5680
5760	1·630	0·2121515	1·5903709	1·558	0·1924399	1·7349500	5760
5840	1·622	0·2099442	1·5965474	1·550	0·1902692	1·7416880	5840
5920	1·614	0·2077761	1·6027239	1·542	0·1881375	1·7484260	5920
6000	1·606	0·2056463	1·6089004	1·535	0·1860439	1·7551640	6000
6080	1·598	0·2035537	1·6150769	1·528	0·1839874	1·7619020	6080
6160	1·590	0·2014973	1·6212534	1·520	0·1819670	1·7686400	6160
6240	1·583	0·1994761	1·6274299	1·513	0·1799817	1·7753780	6240
6320	1·576	0·1974892	1·6336064	1·507	0·1780306	1·7821160	6320
6400	1·569	0·1955358	1·6397829	1·500	0·1761128	1·7888540	6400
6480	1·562	0·1936149	1·6459594	1·494	0·1742274	1·7955920	6480
6560	1·555	0·1917257	1·6521359	1·487	0·1723735	1·8023300	6560
6640	1·548	0·1898674	1·6583124	1·481	0·1705504	1·8090680	6640
6720	1·542	0·1880392	1·6644889	1·475	0·1687573	1·8158060	6720
6800	1·535	0·1862404	1·6706654	1·469	0·1669935	1·8225440	6800
6880	1·529	0·1844704	1·6768419	1·463	0·1652584	1·8292820	6880
6960	1·523	0·1827284	1·6830184	1·457	0·1635511	1·8360200	6960
7000	1·520	0·1818675	1·6861066	1·454	0·1627074	1·8393890	7000
7040	1·517	0·1810136	1·6891949	1·452	0·1618709	1·8427580	7040
7120	1·511	0·1793253	1·6953714	1·446	0·1602171	1·8494960	7120
7200	1·505	0·1776534	1·7015479	1·441	0·1585895	1·8562340	7200
7280	1·500	0·1760268	1·7077244	1·435	0·1569871	1·8629720	7280

Sine of Inclination (1 over)	n = 035			n = 050			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
4620	1 563	0 1945521	1 9120891	1 337	0 1260402	2 7315559	4620
4640	1 563	0 1938433	1 9140544	1 335	0 1253705	2 7348634	4640
4660	1 560	0 1931384	1 9160196	1 333	0 1247048	2 7871709	4660
4680	1 558	0 1924375	1 9179849	1 331	0 1240429	2 7899784	4680
4700	1 555	0 1917403	1 9199501	1 329	0 1233847	2 7427859	4700
4720	1 553	0 1910469	1 9219154	1 327	0 1227302	2 7455934	4720
4740	1 550	0 1903572	1 9238806	1 325	0 1220795	2 7484009	4740
4760	1 548	0 1896713	1 9258459	1 323	0 1214325	2 7512084	4760
4780	1 545	0 1889893	1 9278111	1 321	0 1207893	2 7540159	4780
4800	1 543	0 1883109	1 9297764	1 319	0 1201497	2 7568234	4800
4820	1 540	0 1876361	1 9317416	1 317	0 1195136	2 7596309	4820
4840	1 538	0 1869648	1 9337069	1 315	0 1188811	2 7624384	4840
4860	1 536	0 1862972	1 9356721	1 313	0 1182521	2 7652459	4860
4880	1 533	0 1856331	1 9376374	1 311	0 1176266	2 7680534	4880
4900	1 531	0 1849726	1 9396026	1 309	0 1170047	2 7708609	4900
4920	1 529	0 1843156	1 9415679	1 307	0 1163862	2 7736684	4920
4940	1 526	0 1836621	1 9435331	1 305	0 1157712	2 7764759	4940
4960	1 524	0 1830119	1 9454984	1 304	0 1151596	2 7792834	4960
4980	1 522	0 1823651	1 9474636	1 302	0 1145511	2 7820909	4980
5000	1 520	0 1817218	1 9494289	1 300	0 1139461	2 7848984	5000
5040	1 515	0 1804452	1 9533594	1 296	0 1127460	2 7905134	5040
5120	1 506	0 1779314	1 9612204	1 289	0 1103848	2 8017434	5120
5200	1 498	0 1754687	1 9690814	1 283	0 1080741	2 8129734	5200
5280	1 490	0 1730555	1 9769424	1 276	0 1058122	2 8242034	5280
5360	1 481	0 1706904	1 9848034	1 269	0 1035977	2 8354334	5360
5440	1 474	0 1683718	1 9926644	1 263	0 1014290	2 8466634	5440
5520	1 466	0 1660983	2 0005254	1 257	0 0993047	2 8578934	5520
5600	1 458	0 1638685	2 0083864	1 251	0 0972235	2 8691234	5600
5680	1 451	0 1616811	2 0162474	1 245	0 0951841	2 8803534	5680
5760	1 444	0 1595350	2 0241084	1 239	0 0931853	2 8915834	5760
5840	1 437	0 1574291	2 0319694	1 234	0 0912260	2 9028134	5840
5920	1 430	0 1553620	2 0398304	1 228	0 0893048	2 9140434	5920
6000	1 423	0 1533328	2 0476914	1 223	0 0874209	2 9252734	6000
6080	1 416	0 1513404	2 0555524	1 218	0 0855732	2 9365034	6080
6160	1 411	0 1493838	2 0634134	1 213	0 0837606	2 9477334	6160
6240	1 404	0 1474621	2 0712744	1 208	0 0819823	2 9589634	6240
6320	1 398	0 1455743	2 0791354	1 203	0 0802373	2 9701934	6320
6400	1 392	0 1437195	2 0869964	1 198	0 0785247	2 9814234	6400
6480	1 386	0 1418969	2 0948574	1 194	0 0768436	2 9926534	6480
6560	1 381	0 1401056	2 1027184	1 189	0 0751932	2 9038834	6560
6640	1 375	0 1383449	2 1105794	1 185	0 0735728	2 9151134	6640
6720	1 370	0 1366139	2 1184404	1 180	0 0719815	2 9263434	6720
6800	1 364	0 1349120	2 1263014	1 176	0 0704187	2 9375734	6800
6880	1 359	0 1332385	2 1341624	1 172	0 0688837	2 9488034	6880
6960	1 354	0 1315925	2 1420234	1 168	0 0673756	2 9600334	6960
7000	1 351	0 1307796	2 1459539	1 166	0 0666314	2 9656484	7000
7040	1 349	0 1299734	2 1498844	1 164	0 0658938	2 9712634	7040
7120	1 344	0 1283806	2 1577454	1 160	0 0644377	2 9824934	7120
7200	1 339	0 1268136	2 1656064	1 156	0 0630069	2 9937234	7200
7280	1 334	0 1253118	2 1734674	1 152	0 0616007	3 0049534	7280

VALUES OF N, LOG N, AND D

Sine of Inclination (1 over)	n = ·0275			n = ·030			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
4620	1·773	0·2486568	1·5023557	1·692	0·2284092	1·6389335	4620
4640	1·770	0·2479211	1·5038999	1·689	0·2276832	1·6406180	4640
4660	1·767	0·2471895	1·5054440	1·686	0·2269612	1·6423025	4660
4680	1·764	0·2464617	1·5069881	1·684	0·2262431	1·6439870	4680
4700	1·761	0·2457377	1·5085322	1·681	0·2255288	1·6456715	4700
4720	1·758	0·2450176	1·5100764	1·678	0·2248182	1·6473560	4720
4740	1·755	0·2443013	1·5116205	1·675	0·2241114	1·6490405	4740
4760	1·752	0·2435888	1·5131646	1·673	0·2234085	1·6507250	4760
4780	1·749	0·2428800	1·5147087	1·670	0·2227094	1·6524095	4780
4800	1·747	0·2421747	1·5162529	1·667	0·2220140	1·6540940	4800
4820	1·744	0·2414735	1·5177970	1·665	0·2213221	1·6557785	4820
4840	1·741	0·2407757	1·5193411	1·662	0·2206338	1·6574630	4840
4860	1·738	0·2400816	1·5208852	1·659	0·2199492	1·6591475	4860
4880	1·735	0·2393910	1·5224294	1·657	0·2192682	1·6608320	4880
4900	1·733	0·2387040	1·5239735	1·654	0·2185907	1·6625165	4900
4920	1·730	0·2380205	1·5255176	1·652	0·2179167	1·6642010	4920
4940	1·727	0·2373405	1·5270617	1·649	0·2172463	1·6658855	4940
4960	1·725	0·2366640	1·5286059	1·646	0·2165592	1·6675700	4960
4980	1·722	0·2359908	1·5301500	1·644	0·2159156	1·6692545	4980
5000	1·719	0·2353211	1·5316941	1·642	0·2152554	1·6709390	5000
5040	1·714	0·2339919	1·5347824	1·637	0·2139451	1·6743080	5040
5120	1·704	0·2313731	1·5409589	1·627	0·2113641	1·6810460	5120
5200	1·694	0·2288058	1·5471354	1·617	0·2088345	1·6877840	5200
5280	1·684	0·2262885	1·5533119	1·608	0·2063546	1·6945220	5280
5360	1·674	0·2238196	1·5594884	1·599	0·2039231	1·7012600	5360
5440	1·665	0·2213976	1·5656649	1·591	0·2015384	1·7079980	5440
5520	1·656	0·2190211	1·5718414	1·582	0·1991990	1·7147360	5520
5600	1·647	0·2166888	1·5780178	1·574	0·1969036	1·7214740	5600
5680	1·638	0·2143993	1·5841944	1·565	0·1946510	1·7282120	5680
5760	1·630	0·2121515	1·5903709	1·558	0·1924399	1·7349500	5760
5840	1·622	0·2099442	1·5965474	1·550	0·1902692	1·7416880	5840
5920	1·614	0·2077761	1·6027239	1·542	0·1881375	1·7484260	5920
6000	1·606	0·2056463	1·6089004	1·535	0·1860439	1·7551640	6000
6080	1·598	0·2035537	1·6150769	1·528	0·1839874	1·7619020	6080
6160	1·590	0·2014973	1·6212534	1·520	0·1819670	1·7686400	6160
6240	1·583	0·1994761	1·6274299	1·513	0·1799817	1·7753780	6240
6320	1·576	0·1974892	1·6336064	1·507	0·1780306	1·7821160	6320
6400	1·569	0·1955358	1·6397829	1·500	0·1761128	1·7888540	6400
6480	1·562	0·1936149	1·6459594	1·494	0·1742274	1·7955920	6480
6560	1·555	0·1917257	1·6521359	1·487	0·1723735	1·8023300	6560
6640	1·548	0·1898674	1·6583124	1·481	0·1705504	1·8090680	6640
6720	1·542	0·1880392	1·6644889	1·475	0·1687573	1·8158060	6720
6800	1·535	0·1862404	1·6706654	1·469	0·1669935	1·8225440	6800
6880	1·529	0·1844704	1·6768419	1·463	0·1652584	1·8292820	6880
6960	1·523	0·1827284	1·6830184	1·457	0·1635511	1·8360200	6960
7000	1·520	0·1818675	1·6861066	1·454	0·1627074	1·8393890	7000
7040	1·517	0·1810136	1·6891949	1·452	0·1618709	1·8427580	7040
7120	1·511	0·1793253	1·6953714	1·446	0·1602171	1·8494960	7120
7200	1·505	0·1776634	1·7015479	1·441	0·1585895	1·8562340	7200
7280	1·500	0·1760268	1·7077244	1·435	0·1569871	1·8629720	7280

Sine of Inclination (1 over	n = 035			n = 050			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
4600	1 563	0 1945521	1 9120891	1 337	0 1260402	2 7315559	4620
4640	1 563	0 1938433	1 9140544	1 335	0 1253705	2 7343634	4640
4660	1 560	0 1931384	1 9160196	1 333	0 1247048	2 7371709	4660
4680	1 558	0 1924375	1 9179849	1 331	0 1240429	2 7399784	4680
4700	1 555	0 1917403	1 9199501	1 329	0 1233847	2 7427859	4700
4720	1 553	0 1910469	1 9219154	1 327	0 1227302	2 7455934	4720
4740	1 550	0 1903572	1 9238806	1 325	0 1220795	2 7484009	4740
4760	1 548	0 1896713	1 9258459	1 323	0 1214325	2 7512084	4760
4780	1 545	0 1889893	1 9278111	1 321	0 1207893	2 7540159	4780
4800	1 543	0 1883109	1 9297764	1 319	0 1201497	2 7568234	4800
4820	1 540	0 1876361	1 9317416	1 317	0 1195136	2 7596309	4820
4840	1 538	0 1869648	1 9337069	1 315	0 1188811	2 7624384	4840
4860	1 536	0 1862972	1 9356721	1 313	0 1182521	2 7652459	4860
4880	1 533	0 1856331	1 9376374	1 311	0 1176266	2 7680534	4880
4900	1 531	0 1849726	1 9396026	1 309	0 1170047	2 7708609	4900
4920	1 529	0 1843156	1 9415679	1 307	0 1163862	2 7736684	4920
4940	1 526	0 1836621	1 9435331	1 305	0 1157712	2 7764759	4940
4960	1 524	0 1830119	1 9454984	1 304	0 1151595	2 7792834	4960
4980	1 522	0 1823651	1 9474636	1 302	0 1145511	2 7820909	4980
5000	1 520	0 1817218	1 9494289	1 300	0 1139461	2 7848984	5000
5040	1 515	0 1804452	1 9533594	1 296	0 1127460	2 7905134	5040
5120	1 506	0 1779314	1 9612204	1 289	0 1103848	2 8017434	5120
5200	1 498	0 1754687	1 9690814	1 283	0 1080741	2 8129734	5200
5280	1 490	0 1730555	1 9769424	1 276	0 1058122	2 8242034	5280
5360	1 481	0 1706904	1 9848034	1 269	0 1035977	2 8354334	5360
5440	1 474	0 1683718	1 9926644	1 263	0 1014290	2 8466634	5440
5520	1 466	0 1660983	2 0005254	1 257	0 0993047	2 8578934	5520
5600	1 458	0 1638685	2 0083864	1 251	0 0972235	2 8691234	5600
5680	1 451	0 1616811	2 0162474	1 245	0 0951841	2 8803534	5680
5760	1 444	0 1595350	2 0241084	1 239	0 0931853	2 8915834	5760
5840	1 437	0 1574291	2 0319694	1 234	0 0912260	2 9028134	5840
5920	1 430	0 1553620	2 0398304	1 228	0 0893048	2 9140434	5920
6000	1 423	0 1533328	2 0476914	1 223	0 0874209	2 9252734	6000
6080	1 416	0 1513404	2 0555524	1 218	0 0855732	2 9365034	6080
6160	1 411	0 1493838	2 0634134	1 213	0 0837606	2 9477334	6160
6240	1 404	0 1474621	2 0712744	1 208	0 0819823	2 9589634	6240
6320	1 398	0 1455743	2 0791354	1 203	0 0802373	2 9701934	6320
6400	1 392	0 1437195	2 0869964	1 198	0 0785247	2 9814234	6400
6480	1 386	0 1418969	2 0948574	1 194	0 0768436	2 9926534	6480
6560	1 381	0 1401056	2 1027184	1 189	0 0751932	2 9038834	6560
6640	1 375	0 1383449	2 1105794	1 185	0 0735728	2 9151134	6640
6720	1 370	0 1366139	2 1184404	1 180	0 0719815	2 9263434	6720
6800	1 364	0 1349120	2 1263014	1 176	0 0704187	2 9375734	6800
6880	1 359	0 1332385	2 1341624	1 172	0 0688837	2 9488034	6880
6960	1 354	0 1315925	2 1420234	1 168	0 0673756	2 9600334	6960
7000	1 351	0 1307796	2 1459539	1 166	0 0666314	2 9656484	7000
7040	1 349	0 1299734	2 1498844	1 164	0 0658938	2 9712634	7040
7120	1 344	0 1283806	2 1577454	1 160	0 0644377	2 9824934	7120
7200	1 339	0 1268136	2 1656064	1 156	0 0630069	2 9937234	7200
7280	1 334	0 1253118	2 1734674	1 152	0 0616007	3 0049534	7280

Sine of Inclination (1 over)	n = ·009			n = ·010			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
7360	3·072	0·4874769	5·6091301	2·838	0·4529818	·62323668	7360
7440	3·058	0·4854994	5·6293441	2·825	0·4510348	·62548268	7440
7500	3·048	0·4840322	5·6445046	2·816	0·4495907	·62716718	7500
7520	3·045	0·4835464	5·6495581	2·813	0·4491124	·62772868	7520
7600	3·031	0·4816177	5·6697721	2·800	0·4472143	·62997468	7600
7680	3·018	0·4797128	5·6899861	2·788	0·4453399	·63222068	7680
7760	3·005	0·4778311	5·7102001	2·776	0·4434886	·63446668	7760
7840	2·992	0·4759723	5·7304141	2·765	0·4416600	·63671268	7840
7920	2·979	0·4741359	5·7506281	2·753	0·4398537	·63895868	7920
8000	2·967	0·4723212	5·7708421	2·742	0·4380690	·64120468	8000
8080	2·955	0·4705279	5·7910561	2·731	0·4363060	·64345068	8080
8160	2·943	0·4687556	5·8112701	2·720	0·4345638	·64569668	8160
8240	2·931	0·4670039	5·8314841	2·709	0·4328421	·64794268	8240
8320	2·919	0·4652723	5·8516981	2·699	0·4311405	·65018868	8320
8400	2·908	0·4635606	5·8719121	2·688	0·4294587	·65243468	8400
8480	2·896	0·4618681	5·8921261	2·678	0·4277961	·65468068	8480
8560	2·885	0·4601946	5·9123401	2·668	0·4261524	·65692668	8560
8640	2·874	0·4585398	5·9325541	2·658	0·4245274	·65917268	8640
8720	2·864	0·4569034	5·9527681	2·648	0·4229208	·66141868	8720
8800	2·853	0·4552850	5·9729821	2·638	0·4213320	·66366468	8800
8880	2·842	0·4536841	5·9931961	2·629	0·4197608	·66591068	8880
8960	2·832	0·4521007	6·0134101	2·619	0·4182069	·66815668	8960
9000	2·827	0·4513152	6·0235171	2·615	0·4174362	·66927968	9000
9040	2·822	0·4505342	6·0336241	2·610	0·4166699	·67040268	9040
9120	2·812	0·4489843	6·0538381	2·601	0·4151485	·67264868	9120
9200	2·802	0·4474509	6·0740521	2·592	0·4136455	·67489468	9200
9280	2·792	0·4459336	6·0942661	2·583	0·4121576	·67714068	9280
9360	2·782	0·4444322	6·1144801	2·574	0·4106855	·67938668	9360
9440	2·773	0·4429463	6·1346941	2·566	0·4092289	·68163268	9440
9520	2·764	0·4414758	6·1549081	2·557	0·4077875	·68387868	9520
9600	2·754	0·4400201	6·1751221	2·549	0·4063610	·68612468	9600
9680	2·745	0·4385794	6·1953361	2·541	0·4049494	·68837068	9680
9760	2·736	0·4371532	6·2155501	2·533	0·4035522	·69061668	9760
9840	2·727	0·4357413	6·2357641	2·524	0·4021693	·69286268	9840
9920	2·719	0·4343434	6·2559781	2·517	0·4008004	·69510868	9920
10000	2·710	0·4329593	6·2761921	2·509	0·3994452	·69735468	10000
10080	2·701	0·4315888	6·2964061	2·501	0·3981035	·69960068	10080
10160	2·693	0·4302317	6·3166201	2·493	0·3967752	·70184668	10160
10240	2·685	0·4288878	6·3368341	2·486	0·3954601	·70409268	10240
10320	2·676	0·4275568	6·3570481	2·478	0·3941578	·70633868	10320
10400	2·668	0·4262386	6·3772621	2·471	0·3928682	·70858468	10400
10480	2·660	0·4249329	6·3974761	2·464	0·3915911	·71083068	10480
10560	2·652	0·4236396	6·4176901	2·457	0·3903264	·71307668	10560
10640	2·645	0·4223586	6·4379041	2·449	0·3890738	·71532268	10640
10720	2·637	0·4210895	6·4581181	2·442	0·3878331	·71756868	10720
10800	2·629	0·4198321	6·4783321	2·436	0·3866042	·71981468	10800
10880	2·622	0·4185864	6·4985461	2·429	0·3853869	·72206068	10880
10960	2·614	0·4173521	6·5187601	2·422	0·3841809	·72430668	10960
11000	2·611	0·4167391	6·5288671	2·419	0·3835821	·72542968	11000
11040	2·607	0·4161290	6·5389741	2·415	0·3829861	·72655268	11040

Sine of Inclination (1 over)	n = 011			n = 012			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
7360	2 646	0 422 670	68556034	2 486	0 39 4656	74788401	7 360
7440	2 634	0 4206490	68803094	2 475	0 3935052	7 60 7921	7440
7500	2 626	0 4192268	68988389	2 467	0 3921036	7 260061	7500
7520	2 623	0 4187 57	69050151	2 465	0 3917294	7 327441	7520
7600	2 611	0 4168862	69297214	2 454	0 3898876	75596961	7600
7680	2 600	0 4150407	69544274	2 444	0 3880695	7 866481	7680
7760	2 590	0 4132183	69791391	2 434	0 3862744	761 6001	7760
7840	2 579	0 4114185	70038394	2 424	0 3847020	7640 521	7840
7920	2 568	0 4096410	70285454	2 414	0 3827518	7667 041	7920
8000	2 558	0 4078851	70532514	2 404	0 3810232	76944561	8000
8080	2 548	0 4061505	70779574	2 39	0 3793158	77214081	8080
8160	2 538	0 4044365	71026634	2 386	0 3776292	7748 601	8160
8240	2 528	0 4027437	71273694	2 377	0 3759631	777 121	8240
8320	2 518	0 4010705	71520754	2 368	0 3743169	78022041	8320
8400	2 509	0 3994171	71767814	2 359	0 3726904	78292561	8400
8480	2 499	0 977828	72014874	2 350	0 3710831	78 61681	8480
8560	2 490	0 3961674	72261934	2 342	0 3694946	78831201	8560
8640	2 481	0 3945707	72508994	2 333	0 3679246	791007 1	8640
8720	2 472	0 3929921	72756054	2 325	0 3663729	79370241	8720
8800	2 463	0 3914316	73003114	2 317	0 3648388	796 9761	8800
8880	2 454	0 3898883	73250174	2 308	0 3633222	79909281	8880
8960	2 445	0 3883624	73497234	2 301	0 3618229	80178801	8960
9000	2 441	0 3876057	73620764	2 297	0 3610795	8031 361	9000
9040	2 437	0 3868534	73744294	2 293	0 3603404	80448 21	9040
9120	2 429	0 3853609	73991354	2 285	0 3588744	80717841	9120
9200	2 420	0 3838847	74238414	2 277	0 3574247	80987 61	9200
9280	2 412	0 3824246	74485474	2 270	0 3559910	8126 881	9280
9360	2 404	0 3809803	74732534	2 262	0 3545730	81526401	9360
9440	2 396	0 379 514	74979 94	2 255	0 3531703	8179 321	9440
9520	2 389	0 3781377	75226654	2 248	0 3517827	8206 441	9520
9600	2 381	0 3767388	75473714	2 241	0 3504100	82334961	9600
9680	2 373	0 3753548	75720774	2 234	0 3490 21	82604481	9680
9760	2 366	0 3739852	75967834	2 227	0 3477085	82874001	9760
9840	2 358	0 3726295	76214894	2 220	0 3463790	83143 21	9840
9920	2 351	0 3712880	76461954	2 213	0 3450634	83413041	9920
10000	2 344	0 3699602	76709014	2 207	0 3437614	83682561	10000
10080	2 337	0 3686458	76956074	2 200	0 3424729	8395 2081	10080
10160	2 330	0 3673447	77203134	2 194	0 3411977	84221601	10160
10240	2 323	0 3660568	77450194	2 187	0 3399355	84491121	10240
10320	2 316	0 3647817	77697254	2 181	0 3386860	84760641	10320
10400	2 310	0 3635192	77944314	2 175	0 3374491	85030161	10400
10480	2 303	0 3622691	78191374	2 169	0 3362246	85299681	10480
10560	2 296	0 3610313	78438434	2 163	0 3350124	85569201	10 60
10640	2 290	0 3598057	78685494	2 157	0 3338123	858 8721	10640
10720	2 283	0 3585919	78932554	2 151	0 3326240	86108241	10720
10800	2 277	0 3573898	79179614	2 145	0 3314473	86377761	10800
10880	2 271	0 3561993	79426674	2 139	0 3302822	86647281	10880
10960	2 265	0 3550201	79673734	2 134	0 3291282	86916801	10960
11000	2 262	0 3544346	79797264	2 131	0 3285554	87051561	11000
11040	2 259	0 3538519	79920794	2 128	0 3279854	87186321	11040

Sine of Inclination (1 over)	n = ·013			n = ·014			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
7360	2·351	0·3711730	·81020768	2·235	0·3491923	·87253135	7360
7440	2·341	0·3693089	·81312748	2·225	0·3473533	·87567575	7440
7500	2·333	0·3679270	·81531733	2·218	0·3459901	·87803405	7500
7520	2·331	0·3674693	·81604728	2·216	0·3455388	·87882015	7520
7600	2·321	0·3656538	·81896708	2·205	0·3437482	·88196455	7600
7680	2·311	0·3638618	·82188688	2·198	0·3419811	·88510895	7680
7760	2·302	0·3620928	·82480668	2·189	0·3402369	·88825335	7760
7840	2·293	0·3603463	·82772648	2·180	0·3385153	·89139775	7840
7920	2·284	0·3586220	·83064628	2·172	0·3368158	·89454215	7920
8000	2·275	0·3569193	·83356608	2·163	0·3351378	·89768655	8000
8080	2·266	0·3552378	·83648588	2·155	0·3334809	·90083095	8080
8160	2·257	0·3535771	·83940568	2·147	0·3318447	·90397535	8160
8240	2·249	0·3519367	·84232548	2·139	0·3302288	·90711975	8240
8320	2·240	0·3503162	·84524528	2·131	0·3286328	·91026415	8320
8400	2·232	0·3487154	·84816508	2·124	0·3270564	·91340855	8400
8480	2·224	0·3471337	·85108488	2·116	0·3254990	·91655295	8480
8560	2·216	0·3455707	·85400468	2·108	0·3239603	·91969735	8560
8640	2·208	0·3440262	·85692448	2·101	0·3224400	·92284175	8640
8720	2·200	0·3424998	·85984428	2·094	0·3209379	·92598615	8720
8800	2·193	0·3409911	·86276408	2·087	0·3194534	·92913055	8800
8880	2·185	0·3394998	·86568388	2·080	0·3179862	·93227495	8880
8960	2·178	0·3380258	·86860368	2·073	0·3165361	·93541935	8960
9000	2·174	0·3372950	·87006358	2·069	0·3158173	·93699155	9000
9040	2·170	0·3365685	·87152348	2·066	0·3151028	·93856375	9040
9120	2·163	0·3351277	·87444328	2·059	0·3136859	·94170815	9120
9200	2·156	0·3337031	·87736308	2·053	0·3122852	·94485255	9200
9280	2·149	0·3322944	·88028288	2·046	0·3109003	·94799695	9280
9360	2·142	0·3309014	·88320268	2·040	0·3095310	·95114135	9360
9440	2·136	0·3295237	·88612248	2·033	0·3081769	·95428575	9440
9520	2·129	0·3281610	·88904228	2·027	0·3068379	·95743015	9520
9600	2·122	0·3268131	·89196208	2·021	0·3055137	·96057455	9600
9680	2·116	0·3254799	·89488188	2·015	0·3042041	·96371895	9680
9760	2·110	0·3241610	·89780168	2·009	0·3029087	·96686335	9760
9840	2·103	0·3228562	·90072148	2·003	0·3016273	·97000775	9840
9920	2·097	0·3215652	·90364128	1·997	0·3003597	·97315215	9920
10000	2·091	0·3202878	·90656108	1·991	0·2991057	·97629655	10000
10080	2·085	0·3190238	·90948088	1·985	0·2978650	·97944095	10080
10160	2·079	0·3177730	·91240068	1·980	0·2966375	·98258535	10160
10240	2·073	0·3165352	·91532048	1·974	0·2954229	·98572975	10240
10320	2·067	0·3153102	·91824028	1·969	0·2942209	·98887415	10320
10400	2·061	0·3140976	·92116008	1·964	0·2930315	·99201855	10400
10480	2·055	0·3128975	·92407988	1·958	0·2918545	·99516295	10480
10560	2·050	0·3117094	·92699968	1·953	0·2906894	·99830735	10560
10640	2·044	0·3105335	·92991948	1·948	0·2895364	1·0014517	10640
10720	2·039	0·3093693	·93283928	1·943	0·2883950	1·0045961	10720
10800	2·033	0·3082167	·93575908	1·938	0·2872652	1·0077405	10800
10880	2·028	0·3070756	·93867888	1·933	0·2861468	1·0108849	10880
10960	2·023	0·3059456	·94159868	1·928	0·2850396	1·0140293	10960
11000	2·020	0·3053848	·94305858	1·925	0·2844901	1·0156015	11000
11040	2·018	0·3048267	·94451848	1·923	0·2839434	1·0171737	11040

Sine of Inclination 1 over	n = 015			n = 017			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
7360	2 134	0 3291988	93485501	1 968	0 2941193	1 059 ›023	7360
7440	2 12›	0 3278837	93822401	1 960	0 2923490	1 063320›	7440
7500	2 119	0 3260384	94075076	1 955	0 2910372	1 0661842	7500
7›20	2 116	0 ›255930	94159301	1 9›3	0 2906029	1 0671387	7520
7600	2 108	0 3238263	94496201	1 94›	0 2888807	1 0709569	7600
7680	2 099	0 3220830	94833101	1 937	0 2871819	1 0747751	7680
7760	2 091	0 320›626	9›170001	1 930	0 2855058	1 078 93	7760
7840	2 08›	0 ›186646	9›506901	1 922	0 2838520	1 0824115	7840
7920	2 07›	0 3169687	9›843801	1 91›	0 2822201	1 0862297	7920
8000	2 067	0 ›153342	96180701	1 908	0 2806096	1 0900479	8000
8080	2 0›9	0 3137008	96›17601	1 901	0 2790201	1 0938661	8080
8160	2 0›2	0 3120881	96854501	1 894	0 2774511	1 0976843	8160
8240	2 044	0 3104956	97191401	1 888	0 27›9023	1 101502›	8240
8320	2 037	0 3089229	97528301	1 881	0 2743731	1 1053207	8320
8400	2 029	0 3073697	9786›201	1 874	0 2728633	1 1091389	8400
8480	2 022	0 30›8 3››	98202101	1 868	0 2713724	1 1129›71	8480
8›60	2 015	0 3043200	98›39001	1 862	0 2699001	1 1167753	8560
8640	2 008	0 3028229	98875901	1 855	0 2684461	1 1205935	8640
8720	2 001	0 3013438	99212801	1 849	0 2670100	1 1244117	8720
8800	1 995	0 2998823	99549701	1 843	0 2655914	1 128›299	8800
8880	1 988	0 2984381	99886601	1 837	0 2641899	1 1320481	8880
8960	1 982	0 2970109	1 00223›0	1 831	0 2628054	1 1358663	8960
9000	1 978	0 296303›	1 0039195	1 829	0 2621193	1 1377754	9000
9040	1 975	0 2956004	1 0056040	1 826	0 2614375	1 1396845	9040
9120	1 969	0 2942062	1 008›730	1 820	0 2600859	1 1435027	9120
9200	1 96›	0 2928282	1 0123420	1 814	0 258›502	1 1473209	9200
9280	1 956	0 2914660	1 0157110	1 809	0 2574302	1 1511891	9280
9360	1 950	0 2901194	1 0190800	1 804	0 2561›7	1 1549573	9360
9440	1 944	0 2887879	1 0224490	1 798	0 2548368	1 1587755	9440
9520	1 939	0 2874714	1 02›8180	1 793	0 2535617	1 1625937	9520
9600	1 933	0 2861696	1 0291870	1 788	0 2›23017	1 1664119	9600
9680	1 927	0 2848824	1 032›560	1 783	0 2510›62	1 1702301	9680
9760	1 921	0 2836094	1 03›9250	1 778	0 2498248	1 1740483	9760
9840	1 916	0 2823504	1 0392940	1 773	0 248607›	1 1778665	9840
9920	1 910	0 28110›0	1 0426630	1 768	0 2474034	1 1816847	9920
10000	1 90›	0 279873›2	1 0460320	1 763	0 2462129	1 1855029	10000
10080	1 900	0 2786›47	1 0494010	1 758	0 24503›6	1 189›211	10080
10160	1 894	0 2774492	1 0527700	1 7›3	0 2438713	1 1931393	10160
10240	1 889	0 2762›67	1 0561390	1 749	0 2427198	1 1969575	10240
10320	1 884	0 2750767	1 0›9›080	1 744	0 2415808	1 2007757	10320
10400	1 879	0 2739093	1 0628770	1 740	0 2404›41	1 2045939	10400
10480	1 873	0 2727541	1 0662460	1 735	0 239339›	1 2084121	10480
10560	1 869	0 2716109	1 0696150	1 731	0 2382370	1 2122303	10›60
10640	1 864	0 2704797	1 0729840	1 726	0 2371463	1 2160485	10640
10720	1 8›9	0 269 3600	1 0763530	1 722	0 2360671	1 2198667	10720
10800	1 855	0 2682›19	1 0797220	1 718	0 2349993	1 22›6849	10800
10880	1 850	0 2671552	1 0830910	1 714	0 2339428	1 2275031	10880
10960	1 845	0 2660697	1 0864600	1 710	0 2328973	1 2313213	10960
11000	1 843	0 2655310	1 0881445	1 708	0 2323767	1 2332304	11000
11040	1 841	0 2649950	1 0898290	1 706	0 2318627	1 2351395	11040

Sine of Inclination (1 over)	n = ·020			n = ·0225			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
7360	1·782	0·2509399	1·2464734	1·665	0·2213714	1·4022825	7360
7440	1·775	0·2492299	1·2509654	1·658	0·2197063	1·4073360	7440
7500	1·770	0·2479633	1·2543344	1·654	0·2184732	1·4111261	7500
7520	1·768	0·2475440	1·2554574	1·652	0·2180651	1·4123895	7520
7600	1·761	0·2458818	1·2599494	1·646	0·2164475	1·4174430	7600
7680	1·755	0·2442427	1·2644414	1·640	0·2148529	1·4224965	7680
7760	1·748	0·2426262	1·2689334	1·634	0·2132807	1·4275500	7760
7840	1·742	0·2410319	1·2734254	1·628	0·2117306	1·4326035	7840
7920	1·736	0·2394594	1·2779174	1·623	0·2102022	1·4376570	7920
8000	1·729	0·2379080	1·2824094	1·617	0·2086948	1·4427105	8000
8080	1·723	0·2363774	1·2869014	1·611	0·2072080	1·4477640	8080
8160	1·717	0·2348672	1·2913934	1·606	0·2057415	1·4528175	8160
8240	1·712	0·2333770	1·2958854	1·601	0·2042948	1·4578710	8240
8320	1·706	0·2319063	1·3003774	1·595	0·2028675	1·4629245	8320
8400	1·700	0·2304549	1·3048694	1·590	0·2014594	1·4679780	8400
8480	1·694	0·2290222	1·3093614	1·585	0·2000699	1·4730315	8480
8560	1·689	0·2276079	1·3138534	1·580	0·1986986	1·4780850	8560
8640	1·683	0·2262117	1·3183454	1·575	0·1973453	1·4831385	8640
8720	1·678	0·2248333	1·3228374	1·570	0·1960096	1·4881920	8720
8800	1·673	0·2234722	1·3273294	1·566	0·1946911	1·4932455	8800
8880	1·668	0·2221281	1·3318214	1·561	0·1933896	1·4982990	8880
8960	1·663	0·2208008	1·3363134	1·556	0·1921048	1·5033525	8960
9000	1·658	0·2201433	1·3385594	1·554	0·1914684	1·5058792	9000
9040	1·653	0·2194899	1·3408054	1·552	0·1908362	1·5084060	9040
9120	1·648	0·2181952	1·3452974	1·547	0·1895836	1·5134595	9120
9200	1·643	0·2169163	1·3497894	1·543	0·1883467	1·5185130	9200
9280	1·638	0·2156529	1·3542814	1·539	0·1871252	1·5235665	9280
9360	1·634	0·2144048	1·3587734	1·534	0·1859189	1·5286200	9360
9440	1·629	0·2131716	1·3632654	1·530	0·1847274	1·5336735	9440
9520	1·625	0·2119532	1·3677574	1·526	0·1835505	1·5387270	9520
9600	1·620	0·2107493	1·3722495	1·522	0·1823879	1·5437805	9600
9680	1·616	0·2095596	1·3767414	1·518	0·1812396	1·5488340	9680
9760	1·611	0·2083839	1·3812334	1·514	0·1801051	1·5538875	9760
9840	1·607	0·2072219	1·3857254	1·510	0·1789842	1·5589410	9840
9920	1·603	0·2060734	1·3902174	1·506	0·1778766	1·5639945	9920
10000	1·599	0·2049381	1·3947094	1·502	0·1767821	1·5690480	10000
10080	1·595	0·2038159	1·3992014	1·499	0·1757005	1·5741015	10080
10160	1·591	0·2027065	1·4036934	1·495	0·1746317	1·5791550	10160
10240	1·587	0·2016098	1·4081854	1·491	0·1735754	1·5842085	10240
10320	1·583	0·2005254	1·4126774	1·488	0·1725314	1·5892620	10320
10400	1·579	0·1994533	1·4171694	1·484	0·1714995	1·5943155	10400
10480	1·575	0·1983931	1·4216614	1·481	0·1704795	1·5993690	10480
10560	1·571	0·1973448	1·4261534	1·477	0·1694710	1·6044225	10560
10640	1·568	0·1963082	1·4306454	1·474	0·1684744	1·6094760	10640
10720	1·564	0·1952829	1·4351374	1·471	0·1674889	1·6145295	10720
10800	1·561	0·1942689	1·4396294	1·467	0·1665146	1·6195830	10800
10880	1·557	0·1932661	1·4441214	1·464	0·1655513	1·6246365	10880
10960	1·555	0·1922741	1·4486134	1·461	0·1645988	1·6296900	10960
11000	1·554	0·1917821	1·4508594	1·459	0·1641264	1·6322168	11000
11040	1·553	0·1912928	1·4531054	1·458	0·1636568	1·6347435	11040

Sine of Inclination (1 over)	n = 0250			n = ·0275		
	N	log N	D	N	log N	D
7360	1 571	0 1961758	1 5580917	1 404	0 1711188	1 710
7440	1 565	0 1945514	1 5637007	1 480	0 1730201	1 720
7500	1 561	0 1933187	1 5670180	1 185	0 1710504	1 741
7520	1 559	0 1929508	1 5693217	1 183	0 1712016	1 720
7600	1 554	0 1918786	1 5749307	1 178	0 1697212	1 781
7680	1 548	0 1898194	1 5805617	1 173	0 1682007	1 709
7760	1 543	0 1882875	1 5861007	1 168	0 1667114	1 711
7840	1 537	0 1867774	1 5917817	1 163	0 1652478	1 766
7920	1 532	0 1852888	1 5973907	1 158	0 1637860	1 767
8000	1 527	0 1838212	1 6030117	1 153	0 1623548	1 768
8080	1 522	0 1823742	1 6086267	1 149	0 1609404	1 761
8160	1 517	0 1809478	1 6142417	1 144	0 1595525	1 776
8240	1 512	0 1795401	1 6198567	1 139	0 1581841	1 781
8320	1 507	0 1781521	1 6254717	1 135	0 1568289	1 791
8400	1 502	0 1767831	1 6310867	1 131	0 1554956	1 791
8480	1 498	0 1754326	1 6367017	1 126	0 1541807	1 800
8560	1 493	0 1741003	1 6423167	1 122	0 1528 8	1 808
8640	1 489	0 1727858	1 6479317	1 118	0 1516016	1 812
8720	1 484	0 1714889	1 6535467	1 114	0 1503429	1 816
8800	1 480	0 1702091	1 6591617	1 110	0 1490999	1 827
8880	1 476	0 1689460	1 6647767	1 106	0 1478773	1 831
8960	1 471	0 1676994	1 6703917	1 102	0 1466701	1 837
9040	1 467	0 1664690	1 6760067	1 098	0 1454782	1 843
9120	1 463	0 1652543	1 6816217	1 094	0 1443025	1 854
9200	1 459	0 1640552	1 6872367	1 090	0 1431431	1 863
9280	1 455	0 1628720	1 6928517	1 086	0 1419968	1 872
9360	1 451	0 1617034	1 6984667	1 082	0 1408656	1 880
9440	1 447	0 1605497	1 7040817	1 078	0 1397496	1 888
9520	1 443	0 1594101	1 7096967	1 074	0 1386488	1 896
9600	1 439	0 1582850	1 7153117	1 070	0 1375592	1 904
9680	1 435	0 1571737	1 7209267	1 066	0 1364848	1 912
9760	1 431	0 1560763	1 7265417	1 062	0 1354256	1 920
9840	1 427	0 1549925	1 7321567	1 058	0 1343816	1 928
9920	1 423	0 1539220	1 7377717	1 054	0 1333528	1 936
10000	1 419	0 1528648	1 7433867	1 050	0 1323392	1 944
10080	1 415	0 1518208	1 7490017	1 046	0 1313408	1 952
10160	1 411	0 1507896	1 7546167	1 042	0 1303576	1 960
10240	1 407	0 1497712	1 7602317	1 038	0 1293896	1 968
10320	1 403	0 1487654	1 7658467	1 034	0 1284368	1 976
10400	1 399	0 1477721	1 7714617	1 030	0 1274992	1 984
10480	1 395	0 1467911	1 7770767	1 026	0 1265768	1 992
10560	1 391	0 1458223	1 7826917	1 022	0 1256696	2 000
10640	1 387	0 1448656	1 7883067	1 018	0 1247776	2 008
10720	1 383	0 1439208	1 7939217	1 014	0 1239008	2 016
10800	1 379	0 1429878	1 7995367	1 010	0 1230392	2 024
10880	1 375	0 1420665	1 8051517	1 006	0 1221928	2 032
10960	1 371	0 1411568	1 8107667	1 002	0 1213616	2 040
11040	1 367	0 1402586	1 8163817	0 998	0 1205456	2 048
11120	1 363	0 1393717	1 8219967	0 994	0 1197448	2 056
11200	1 359	0 1384961	1 8276117	0 990	0 1189592	2 064
11280	1 355	0 1376317	1 8332267	0 986	0 1181888	2 072
11360	1 351	0 1367784	1 8388417	0 982	0 1174336	2 080
11440	1 347	0 1359361	1 8444567	0 978	0 1166936	2 088
11520	1 343	0 1351047	1 8500717	0 974	0 1159688	2 096
11600	1 339	0 1342842	1 8556867	0 970	0 1152592	2 104
11680	1 335	0 1334744	1 8613017	0 966	0 1145648	2 112
11760	1 331	0 1326753	1 8669167	0 962	0 1138856	2 120
11840	1 327	0 1318868	1 8725317	0 958	0 1132216	2 128
11920	1 323	0 1311089	1 8781467	0 954	0 1125728	2 136
12000	1 319	0 1303415	1 8837617	0 950	0 1119392	2 144
12080	1 315	0 1295846	1 8893767	0 946	0 1113208	2 152
12160	1 311	0 1288381	1 8949917	0 942	0 1107176	2 160
12240	1 307	0 1281020	1 9006067	0 938	0 1101296	2 168
12320	1 303	0 1273762	1 9062217	0 934	0 1095568	2 176
12400	1 299	0 1266607	1 9118367	0 930	0 1089992	2 184
12480	1 295	0 1259555	1 9174517	0 926	0 1084568	2 192
12560	1 291	0 1252605	1 9230667	0 922	0 1079296	2 200
12640	1 287	0 1245757	1 9286817	0 918	0 1074176	2 208
12720	1 283	0 1239011	1 9342967	0 914	0 1069208	2 216
12800	1 279	0 1232366	1 9399117	0 910	0 1064392	2 224
12880	1 275	0 1225822	1 9455267	0 906	0 1059728	2 232
12960	1 271	0 1219378	1 9511417	0 902	0 1055216	2 240
13040	1 267	0 1213034	1 9567567	0 898	0 1050856	2 248
13120	1 263	0 1206790	1 9623717	0 894	0 1046648	2 256
13200	1 259	0 1200645	1 9679867	0 890	0 1042592	2 264
13280	1 255	0 1194599	1 9736017	0 886	0 1038688	2 272
13360	1 251	0 1188652	1 9792167	0 882	0 1034936	2 280
13440	1 247	0 1182803	1 9848317	0 878	0 1031336	2 288
13520	1 243	0 1177052	1 9904467	0 874	0 1027888	2 296
13600	1 239	0 1171399	1 9960617	0 870	0 1024592	2 304
13680	1 235	0 1165843	2 0016767	0 866	0 1021448	2 312
13760	1 231	0 1160384	2 0072917	0 862	0 1018456	2 320
13840	1 227	0 1155022	2 0129067	0 858	0 1015616	2 328
13920	1 223	0 1149756	2 0185217	0 854	0 1012928	2 336
14000	1 219	0 1144587	2 0241367	0 850	0 1010392	2 344
14080	1 215	0 1139514	2 0297517	0 846	0 1008008	2 352
14160	1 211	0 1134537	2 0353667	0 842	0 1005776	2 360
14240	1 207	0 1129656	2 0409817	0 838	0 1003696	2 368
14320	1 203	0 1124871	2 0465967	0 834	0 1001768	2 376
14400	1 199	0 1120182	2 0522117	0 830	0 1000000	2 384

Sine of Inclination (1 over)	n = ·030			n = ·035			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
7360	1·430	0·1554097	1·8697100	1·330	0·1237546	2·1813284	7360
7440	1·425	0·1538563	1·8764480	1·325	0·1222613	2·1891894	7440
7500	1·421	0·1527070	1·8815015	1·322	0·1211567	2·1950851	7500
7520	1·420	0·1523267	1·8831860	1·321	0·1207914	2·1970504	7520
7600	1·415	0·1508202	1·8899240	1·316	0·1103444	2·2049114	7600
7680	1·410	0·1493363	1·8966620	1·312	0·1179198	2·2127724	7680
7760	1·406	0·1478745	1·9034000	1·308	0·1165170	2·2206334	7760
7840	1·401	0·1464343	1·9101380	1·304	0·1151357	2·2284944	7840
7920	1·396	0·1450154	1·9168760	1·299	0·1137755	2·2363554	7920
8000	1·392	0·1436172	1·9236140	1·296	0·1124358	2·2442164	8000
8080	1·388	0·1422393	1·9303520	1·292	0·1111160	2·2520774	8080
8160	1·383	0·1408813	1·9370900	1·288	0·1098160	2·2599384	8160
8240	1·379	0·1395428	1·9438280	1·284	0·1085353	2·2677994	8240
8320	1·375	0·1382232	1·9505660	1·280	0·1072733	2·2756604	8320
8400	1·371	0·1369224	1·9573040	1·277	0·1060299	2·2835214	8400
8480	1·367	0·1356399	1·9640420	1·273	0·1048045	2·2913824	8480
8560	1·363	0·1343754	1·9707800	1·269	0·1035968	2·2992434	8560
8640	1·359	0·1331285	1·9775180	1·266	0·1024066	2·3071044	8640
8720	1·355	0·1318989	1·9842560	1·263	0·1012335	2·3149654	8720
8800	1·351	0·1306861	1·9909940	1·259	0·1000770	2·3228264	8800
8880	1·347	0·1294898	1·9977320	1·256	0·0989368	2·3306874	8880
8960	1·344	0·1283098	2·0044700	1·253	0·0978128	2·3385484	8960
9000	1·342	0·1277256	2·0078390	1·251	0·0972566	2·3424789	9000
9040	1·340	0·1271457	2·0112080	1·249	0·0967045	2·3464094	9040
9120	1·337	0·1259973	2·0179460	1·246	0·0956116	2·3542704	9120
9200	1·333	0·1248643	2·0246840	1·243	0·0945339	2·3621314	9200
9280	1·330	0·1237464	2·0314220	1·240	0·0934710	2·3699924	9280
9360	1·326	0·1226434	2·0381600	1·237	0·0924228	2·3778534	9360
9440	1·323	0·1215548	2·0448980	1·234	0·0913889	2·3857144	9440
9520	1·320	0·1204805	2·0516360	1·231	0·0903691	2·3935754	9520
9600	1·316	0·1194202	2·0583740	1·228	0·0893630	2·4014364	9600
9680	1·313	0·1183737	2·0651120	1·226	0·0883707	2·4092974	9680
9760	1·310	0·1173407	2·0718500	1·223	0·0873916	2·4171584	9760
9840	1·307	0·1163210	2·0785880	1·220	0·0864256	2·4250194	9840
9920	1·304	0·1153144	2·0853260	1·218	0·0854724	2·4328804	9920
10000	1·301	0·1143206	2·0920640	1·215	0·0845319	2·4407414	10000
10080	1·298	0·1133393	2·0988020	1·212	0·0836038	2·4486024	10080
10160	1·295	0·1123704	2·1055400	1·210	0·0826879	2·4564634	10160
10240	1·292	0·1114138	2·1122780	1·207	0·0817840	2·4643244	10240
10320	1·290	0·1104691	2·1190160	1·205	0·0808918	2·4721854	10320
10400	1·287	0·1095362	2·1257540	1·202	0·0800113	2·4800464	10400
10480	1·284	0·1086149	2·1324920	1·200	0·0791421	2·4879074	10480
10560	1·281	0·1077048	2·1392300	1·198	0·0782842	2·4957684	10560
10640	1·279	0·1068061	2·1459680	1·195	0·0774373	2·5036294	10640
10720	1·276	0·1059184	2·1527060	1·193	0·0766012	2·5114904	10720
10800	1·274		2·1594440	1·1[illegible]	[illegible]0757757	2·5193514	10800
10880	1·271		1661820	1[illegible]	[illegible]09	2·5272124	10880
10960	1·269		729200	1	[illegible]2	2·5350734	10960
11000	1·267		·2890	1		2·5390031	11000
11040	1·266		·580	1		2·5429314	11040

Sine of Inclination (1 over)	n = 050			Sine of Inclination (1 over	n = 009		
	N	log N	D		N	log N	D
7360	1 149	0 0602185	3 0161834	11120	2 600	0 4149171	65591881
7440	1 145	0 0588596	3 0274134	11200	2 592	0 4137162	65794021
7500	1 142	0 0578555	3 0358358	11280	2 585	0 4125261	65996161
7520	1 142	0 0575235	3 0386434	11360	2 578	0 4113466	66198301
7600	1 138	0 0562098	3 0498734	11440	2 571	0 4101776	66400441
7680	1 135	0 0549179	3 1611034	11520	2 565	0 4090187	66602581
7760	1 131	0 0536473	3 1723334	11600	2 558	0 4078701	66804721
7840	1 128	0 0523977	3 1835634	11680	2 551	0 4067317	67006861
7920	1 125	0 0511686	3 1947934	11760	2 545	0 4056031	67209001
8000	1 122	0 0499593	3 2060234	11840	2 538	0 4044842	67411141
8080	1 119	0 0487695	3 2172534	11920	2 531	0 4032751	67613281
8160	1 116	0 0475989	3 2284834	12000	2 525	0 4022754	67815421
8240	1 113	0 0464471	3 2397134	12080	2 519	0 4011850	68017561
8320	1 110	0 0453135	3 2509434	12160	2 512	0 4001039	68219701
8400	1 107	0 0441980	3 2621734	12240	2 506	0 3990319	68421841
8480	1 104	0 0430999	3 2734034	12320	2 500	0 3979688	68623981
8560	1 102	0 0420190	3 2846334	12400	2 494	0 3969147	68826121
8640	1 099	0 0409550	3 2958634	12480	2 488	0 3958693	69028261
8722	1 096	0 0399076	3 3070934	12560	2 482	0 3948326	69230401
8800	1 094	0 0388763	3 3183234	12640	2 476	0 3938045	69432541
8880	1 091	0 0378608	3 3295534	12720	2 470	0 3927847	69634681
9960	1 089	0 0368610	3 3407834	12800	2 465	0 3917732	69836821
9000	1 087	0 0363667	3 3463984	12880	2 459	0 3907698	70038961
9040	1 086	0 0358764	3 3520134	12960	2 453	0 3897746	70241101
9120	1 084	0 0349067	3 3632434	13000	2 451	0 3892799	70342171
9200	1 081	0 0339517	3 3744734	13040	2 448	0 3887874	70443241
9280	1 079	0 0330111	3 3857034	13120	2 442	0 3878081	70645381
9360	1 077	0 0320846	3 3969334	13200	2 437	0 3868365	70847521
9440	1 074	0 0311719	3 4081634	13280	2 431	0 3858727	71049661
9520	1 072	0 0302728	3 4193934	13360	2 426	0 3849167	71251801
9600	1 070	0 0293870	3 4306234	13440	2 421	0 3839680	71453941
9680	1 068	0 0285144	3 4418534	13520	2 416	0 3830267	71656081
9760	1 066	0 0276546	3 4530834	13600	2 410	0 3820927	71858221
9840	1 064	0 0268075	3 4643134	13680	2 405	0 3811659	72060361
9920	1 062	0 0259727	3 4755434	13760	2 400	0 3802463	72262501
10000	1 060	0 0251500	3 4867734	13840	2 395	0 3793338	72464641
10080	1 058	0 0243393	3 4980034	13920	2 390	0 3784282	72666781
10160	1 056	0 0235403	3 5092334	14000	2 385	0 3775296	72868921
10240	1 054	0 0227529	3 5204634	14080	2 380	0 3766378	73071061
10320	1 052	0 0219768	3 5316934	14160	2 375	0 3757527	73273201
10400	1 050	0 0212118	3 5429234	14240	2 371	0 3748742	73475341
10480	1 048	0 0204577	3 5541534	14320	2 366	0 3740024	73677481
10560	1 046	0 0197144	3 5653834	14400	2 361	0 3731371	73879621
10640	1 045	0 0189818	3 5766134	14480	2 357	0 3722783	74081761
10720	1 043	0 0182595	3 5878434	14560	2 352	0 3714257	74283901
10800	1 041	0 0175474	3 5990734	14640	2 347	0 3705793	74486041
10880	1 040	0 0168454	3 6103034	14720	2 343	0 3697392	74688181
10960	1 038	0 0161532	3 6215334	14800	2 338	0 3689053	74890321
11000	1 037	0 0158107	3 6271484	14880	2 334	0 3680775	75092461
11040	1 036	0 0154707	3 6327634	14960	2 329	0 3672556	75294601

Sine of Inclination (1 over)	n = ·010			n = ·011			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
11120	2·409	0·3818024	·72879868	2·253	0·3526949	·80167854	11120
11200	2·402	0·3806297	·73104468	2·247	0·3515488	·80414914	11200
11280	2·396	0·3794677	·73329068	2·241	0·3504133	·80661974	11280
11360	2·390	0·3783162	·73553668	2·235	0·3492883	·80909034	11360
11440	2·383	0·3771751	·73778268	2·229	0·3481737	·81156094	11440
11520	2·377	0·3760443	·74002868	2·224	0·3470693	·81403154	11520
11600	2·371	0·3749237	·74227468	2·218	0·3459750	·81650214	11600
11680	2·365	0·3738132	·74452068	2·213	0·3448908	·81897274	11680
11760	2·359	0·3727124	·74676668	2·207	0·3438163	·82144334	11760
11840	2·353	0·3716213	·74901268	2·202	0·3427514	·82391394	11840
11920	2·347	0·3705399	·75125868	2·196	0·3416962	·82638454	11920
12000	2·341	0·3694679	·75350468	2·191	0·3406503	·82885514	12000
12080	2·336	0·3684051	·75575068	2·186	0·3396136	·83132574	12080
12160	2·330	0·3673516	·75799668	2·181	0·3385861	·83379634	12160
12240	2·324	0·3663072	·76024268	2·176	0·3375677	·83626694	12240
12320	2·319	0·3652717	·76248868	2·170	0·3365581	·83873754	12320
12400	2·313	0·3642450	·76473468	2·165	0·3355572	·84120814	12400
12480	2·308	0·3632270	·76698068	2·161	0·3345650	·84367874	12480
12560	2·303	0·3622176	·76922668	2·156	0·3335815	·84614934	12560
12640	2·297	0·3612168	·77147268	2·151	0·3326065	·84861994	12640
12720	2·292	0·3602243	·77371868	2·146	0·3316397	·85109054	12720
12800	2·287	0·3592401	·77596468	2·141	0·3306811	·85356114	12800
12880	2·282	0·3582640	·77821068	2·137	0·3297305	·85603174	12880
12960	2·277	0·3572959	·78045668	2·132	0·3287880	·85850234	12960
13000	2·274	0·3568148	·78157968	2·130	0·3283196	·85973764	13000
13040	2·272	0·3563358	·78270268	2·127	0·3278534	·86097294	13040
13120	2·267	0·3553836	·78494868	2·123	0·3269266	·86344354	13120
13200	2·262	0·3544390	·78719468	2·118	0·3260074	·86591414	13200
13280	2·257	0·3535021	·78944068	2·114	0·3250959	·86838474	13280
13360	2·252	0·3525729	·79168668	2·110	0·3241920	·87085534	13360
13440	2·247	0·3516511	·79393268	2·105	0·3232955	·87332594	13440
13520	2·243	0·3507366	·79617868	2·101	0·3224063	·87579654	13520
13600	2·238	0·3498294	·79842468	2·097	0·3215243	·87826714	13600
13680	2·233	0·3489294	·80067068	2·092	0·3206495	·88073774	13680
13760	2·229	0·3480365	·80291668	2·088	0·3197817	·88320834	13760
13840	2·224	0·3471506	·80516268	2·084	0·3189209	·88567894	13840
13920	2·220	0·3462716	·80740868	2·080	0·3180669	·88814954	13920
14000	2·215	0·3453995	·80965468	2·076	0·3172198	·89062014	14000
					0·3163795	·89309074	14080

Sine of Inclination 1 over	n = ·012			n = ·013			Sine of Inclination 1 over
	N	log N	D	N	log N	D	
11120	2 123	0 3268535	87455841	2 012	0 3037187	94743828	11120
11200	2 117	0 3257324	87725361	2 007	0 3026215	95035808	11200
11280	2 112	0 3246220	87994881	2 002	0 3015349	95327788	11280
11360	2 106	0 3235222	88264401	1 997	0 3004587	95619768	11360
11440	2 101	0 3224326	88533921	1 992	0 2993927	95911748	11440
11520	2 096	0 3213532	88803441	1 988	0 2983370	96203728	11520
11600	2 091	0 3202837	89072961	1 983	0 2972912	96495708	11600
11680	2 086	0 3192245	89342481	1 978	0 2962553	96787688	11680
11760	2 081	0 3181748	89612001	1 973	0 2952291	97079668	11760
11840	2 076	0 3171347	89881521	1 969	0 2942123	97371648	11840
11920	2 071	0 3161042	90151041	1 964	0 2932052	97663628	11920
12000	2 066	0 3150829	90420561	1 960	0 2922073	97955608	12000
12080	2 061	0 3140708	90690081	1 955	0 2912185	98247588	12080
12160	2 056	0 3130679	90959601	1 951	0 2902389	98539568	12160
12240	2 052	0 3120740	91229121	1 947	0 2892682	98831548	12240
12320	2 047	0 3110889	91498641	1 942	0 2883062	99123528	12320
12400	2 042	0 3101125	91768161	1 938	0 2873529	99415508	12400
12480	2 038	0 3091447	92037681	1 934	0 2864082	99707488	12480
12560	2 033	0 3081855	92307201	1 930	0 2854720	99999468	12560
12640	2 029	0 3072347	92576721	1 926	0 2845442	1 0029145	12640
12720	2 024	0 3062921	92846241	1 921	0 2836245	1 0058343	12720
12800	2 020	0 3053577	93115761	1 917	0 2827130	1 0087541	12800
12880	2 016	0 3044313	93385281	1 913	0 2818094	1 0116739	12880
12960	2 011	0 3035129	93654801	1 909	0 2809137	1 0145937	12960
13000	2 009	0 3030566	93789561	1 908	0 2804688	1 0160536	13000
13040	2 007	0 3026024	93924321	1 906	0 2800259	1 0175135	13040
13120	2 003	0 3016997	94193841	1 902	0 2791459	1 0204333	13120
13200	1 999	0 3008045	94463361	1 898	0 2782734	1 0233531	13200
13280	1 995	0 2999169	94732881	1 894	0 2774084	1 0262729	13280
13360	1 991	0 2990369	95002401	1 890	0 2765509	1 0291927	13360
13440	1 987	0 2981642	95271921	1 887	0 2757007	1 0321125	13440
13520	1 983	0 2972987	95541441	1 883	0 2748577	1 0350323	13520
13600	1 979	0 2964405	95810961	1 879	0 2740219	1 0379521	13600
13680	1 975	0 2955894	96080481	1 876	0 2731931	1 0408719	13680
13760	1 971	0 2947452	96350001	1 872	0 2723712	1 0437917	13760
13840	1 967	0 2939080	96619521	1 869	0 2715563	1 0467115	13840
13920	1 964	0 2930776	96889041	1 865	0 2707482	1 0496313	13920
14000	1 960	0 2922540	97158561	1 862	0 2699468	1 0525511	14000
14080	1 956	0 2914371	97428081	1 858	0 2691520	1 0554709	14080
14160	1 953	0 2906269	97697601	1 855	0 2683638	1 0583907	14160
14240	1 949	0 2898230	97967121	1 852	0 2675821	1 0613105	14240
14320	1 945	0 2890256	98236641	1 848	0 2668068	1 0642303	14320
14400	1 942	0 2882347	98506161	1 845	0 2660379	1 0671501	14400
14480	1 938	0 2874501	98775681	1 842	0 2652751	1 0700699	14480
14560	1 935	0 2866717	99045201	1 839	0 2645187	1 0729897	14560
14640	1 932	0 2858994	99314721	1 836	0 2637682	1 0759095	14640
14720	1 928	0 2851332	99584241	1 832	0 2630238	1 0788293	14720
14800	1 925	0 2843730	99853761	1 829	0 2622853	1 0817491	14800
14880	1 921	0 2836187	10012328	1 826	0 2615527	1 0846689	14880
14960	1 918	0 2828704	10039280	1 823	0 2608260	1 0875887	14960

VALUES OF N, LOG N, AND D

Sine of Inclination (1 over)	n = ·014			n = ·015			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
11120	1·918	0·2828580	1·0203181	1·836	0·2639311	1·0931980	11120
11200	1·913	0·2817834	1·0234625	1·832	0·2628780	1·0965670	11200
11280	1·909	0·2807194	1·0266069	1·827	0·2618353	1·0999360	11280
11360	1·904	0·2796657	1·0297513	1·823	0·2608030	1·1033050	11360
11440	1·899	0·2786222	1·0328957	1·819	0·2597808	1·1066740	11440
11520	1·895	0·2775887	1·0360401	1·815	0·2587687	1·1100430	11520
11600	1·890	0·2765653	1·0391845	1·810	0·2577664	1·1134120	11600
11680	1·886	0·2755517	1·0423289	1·806	0·2567741	1·1167810	11680
11760	1·882	0·2745478	1·0454733	1·802	0·2557913	1·1201500	11760
11840	1·877	0·2735533	1·0486177	1·798	0·2548178	1·1235190	11840
11920	1·873	0·2725683	1·0517621	1·794	0·2538539	1·1268880	11920
12000	1·869	0·2715925	1·0549065	1·790	0·2528991	1·1302570	12000
12080	1·865	0·2706258	1·0580509	1·786	0·2519533	1·1336260	12080
12160	1·861	0·2696682	1·0611953	1·782	0·2510165	1·1369950	12160
12240	1·857	0·2687195	1·0643397	1·779	0·2500886	1·1403640	12240
12320	1·853	0·2677794	1·0674841	1·775	0·2491693	1·1437330	12320
12400	1·849	0·2668480	1·0706285	1·771	0·2482586	1·1471020	12400
12480	1·845	0·2659250	1·0737729	1·767	0·2473564	1·1504710	12480
12560	1·841	0·2650105	1·0769173	1·764	0·2464626	1·1538400	12560
12640	1·837	0·2641045	1·0800617	1·760	0·2455772	1·1572090	12640
12720	1·833	0·2632066	1·0832061	1·757	0·2446999	1·1605780	12720
12800	1·829	0·2623168	1·0863505	1·753	0·2438305	1·1639470	12800
12880	1·826	0·2614348	1·0894949	1·750	0·2429690	1·1673160	12880
12960	1·822	0·2605607	1·0926393	1·746	0·2421153	1·1706850	12960
13000	1·820	0·2601265	1·0942115	1·745	0·2416913	1·1723695	13000
13040	1·818	0·2596944	1·0957837	1·743	0·2412694	1·1740540	13040
13120	1·815	0·2588358	1·0989281	1·740	0·2404311	1·1774230	13120
13200	1·811	0·2579847	1·1020725	1·736	0·2396003	1·1807920	13200
13280	1·808	0·2571411	1·1052169	1·733	0·2387769	1·1841610	13280
13360	1·804	0·2563050	1·1083613	1·730	0·2379609	1·1875300	13360
13440	1·801	0·2554760	1·1115057	1·726	0·2371521	1·1908990	13440
13520	1·797	0·2546542	1·1146501	1·723	0·2363505	1·1942680	13520
13600	1·794	0·2538396	1·1177945	1·720	0·2355560	1·1976370	13600
13680	1·791	0·2530320	1·1209389	1·717	0·2347684	1·2010060	13680
13760	1·787	0·2522313	1·1240833	1·714	0·2339876	1·2043750	13760
13840	1·784	0·2514375	1·1272277	1·711	0·2332137	1·2077440	13840
13920	1·781	0·2506503	1·1303721	1·708	0·2324465	1·2111130	13920
14000	1·778	0·2498698	1·1335165	1·705	0·2316859	1·2144820	14000
14080	1·775	0·2490960	1·1366609	1·701	0·2309319	1·2178510	14080
14160	1·771	0·2483287	1·1398053	1·699	0·2301843	1·2212200	14160
14240	1·768	0·2475678	1·1429497	1·696	0·2294431	1·2245890	14240
14320	1·765	0·2468133	1·1460941	1·693	0·2287083	1·2279580	14320
14400	1·762	0·2460651	1·1492385	1·690	0·2279797	1·2313270	14400
14480	1·759	0·2453231	1·1523829	1·688	0·2272573	1·2346960	14480
14560	1·756	0·2445872	1·1555273	1·685	0·2265410	1·2380650	14560
14640	1·753	0·2438574	1·1586717	1·682	0·2258307	1·2414340	14640
14720	1·750	0·2431336	1·1618161	1·679	0·2251263	1·2448030	14720
14800	1·747	0·2424156	1·1649605	1·677	0·2244278	1·2481720	14800
14880	1·745	0·2417035	1·1681049	1·674	0·2237352	1·2515410	14880
14960	1·742	0·2409973	1·1712493	1·671	0·2230483	1·2549100	14960

Sine of Inclination (1 over)	n = ·017			n = ·020			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
11120	1 702	0 2308388	1 2389577	1 550	0 1903221	1 4575974	11120
11200	1 698	0 2298255	1 2427759	1 547	0 1893619	1 4620894	11200
11280	1 694	0 2288226	1 2465941	1 543	0 1884120	1 4665814	11280
11360	1 690	0 2278299	1 2504123	1 540	0 1874721	1 4710734	11360
11440	1 686	0 2268473	1 2542305	1 537	0 1865422	1 4755654	11440
11520	1 682	0 2258746	1 2580487	1 533	0 1856220	1 4800574	11520
11600	1 678	0 2249119	1 2618669	1 530	0 1847115	1 4845494	11600
11680	1 675	0 2239586	1 2656851	1 527	0 1838107	1 4890414	11680
11760	1 671	0 2230150	1 2695033	1 524	0 1829192	1 4935334	11760
11840	1 668	0 2220806	1 2733215	1 521	0 1820368	1 4980254	11840
11920	1 664	0 2211556	1 2771397	1 518	0 1811637	1 5025174	11920
12000	1 661	0 2202397	1 2809579	1 515	0 1802995	1 5070094	12000
12080	1 657	0 2193327	1 2847761	1 512	0 1794441	1 5115014	12080
12160	1 654	0 2184347	1 2885943	1 509	0 1785975	1 5159934	12160
12240	1 650	0 2175454	1 2924125	1 506	0 1777595	1 5204854	12240
12320	1 647	0 2166646	1 2962307	1 503	0 1769299	1 5249774	12320
12400	1 644	0 2157924	1 3000489	1 500	0 1761088	1 5294694	12400
12480	1 640	0 2149285	1 3038671	1 497	0 1752959	1 5339614	12480
12560	1 637	0 2140730	1 3076853	1 494	0 1744912	1 5384534	12560
12640	1 634	0 2132257	1 3115035	1 492	0 1736946	1 5429454	12640
12720	1 631	0 2123864	1 3153217	1 489	0 1729058	1 5474374	12720
12800	1 628	0 2115550	1 3191399	1 486	0 1721247	1 5519294	12800
12880	1 623	0 2107314	1 3229581	1 484	0 1713514	1 5564214	12880
12960	1 621	0 2099155	1 3267763	1 481	0 1705857	1 5609134	12960
13000	1 620	0 2095105	1 3286854	1 480	0 1702056	1 5631594	13000
13040	1 618	0 2091073	1 3305945	1 479	0 1698275	1 5654054	13040
13120	1 615	0 2083067	1 3344127	1 476	0 1690768	1 5698974	13120
13200	1 613	0 2075134	1 3382309	1 473	0 1683333	1 5743894	13200
13280	1 610	0 2067275	1 3420491	1 471	0 1675970	1 5788814	13280
13360	1 607	0 2059490	1 3458673	1 469	0 1668679	1 5833734	13360
13440	1 604	0 2051775	1 3496855	1 466	0 1661458	1 5878654	13440
13520	1 601	0 2044130	1 3535037	1 464	0 1654306	1 5923574	13520
13600	1 598	0 2036555	1 3573219	1 461	0 1647223	1 5968494	13600
13680	1 596	0 2029049	1 3611401	1 459	0 1640208	1 6013414	13680
13760	1 593	0 2021611	1 3649583	1 457	0 1633259	1 6058334	13760
13840	1 590	0 2014240	1 3687765	1 454	0 1626376	1 6103254	13840
13920	1 587	0 2006935	1 3725947	1 452	0 1619557	1 6148174	13920
14000	1 585	0 1999696	1 3764129	1 450	0 1612803	1 6193094	14000
14080	1 582	0 1992522	1 3802311	1 447	0 1606113	1 6238014	14080
14160	1 580	0 1985412	1 3840493	1 445	0 1599486	1 6282934	14160
14240	1 577	0 1978364	1 3878675	1 443	0 1592920	1 6327854	14240
14320	1 574	0 1971379	1 3916857	1 441	0 1586416	1 6372774	14320
14400	1 572	0 1964456	1 3955039	1 439	0 1579972	1 6417694	14400
14480	1 569	0 1957594	1 3993221	1 437	0 1573588	1 6462614	14480
14560	1 567	0 1950793	1 4031403	1 435	0 1567262	1 6507534	14560
14640	1 565	0 1944049	1 4069585	1 433	0 1560994	1 6552454	14640
14720	1 562	0 1937364	1 4107767	1 430	0 1554784	1 6597374	14720
14800	1 560	0 1930738	1 4145949	1 428	0 1548631	1 6642294	14800
14880	1 557	0 1924169	1 4184131	1 426	0 1542535	1 6687214	14880
14960	1 555	0 1917657	1 4222313	1 424	0 1536494	1 6732134	14960

L 2

Sine of Inclination Over	n = ·0225			n = ·0250			Sine of Inclination Over
	N	log. N	D	N	log. N	D	
11120	1·435	0·1627253	1·6397970	1·378	0·1393114	1·8219967	11120
11200	1·434	0·1618342	1·6418505	1·375	0·1384255	1·8276117	11200
11280	1·432	0·1608933	1·6439040	1·373	0·1375496	1·8332267	11280
11360	1·429	0·1599923	1·6459575	1·370	0·1366836	1·8388417	11360
11440	1·427	0·1591011	1·6480110	1·367	0·1358272	1·8444567	11440
11520	1·424	0·1582196	1·6500645	1·365	0·1349805	1·8500717	11520
11600	1·422	0·1573477	1·6521180	1·362	0·1341432	1·8556867	11600
11680	1·419	0·1564853	1·6541715	1·359	0·1333151	1·8613017	11680
11760	1·417	0·1556321	1·6562250	1·357	0·1324966	1·8669167	11760
11840	1·415	0·1547879	1·6582785	1·354	0·1316868	1·8725317	11840
11920	1·412	0·1539529	1·6603320	1·352	0·1308861	1·8781467	11920
12000	1·410	0·1531267	1·6623855	1·349	0·1300940	1·8837617	12000
12080	1·408	0·1523092	1·6644390	1·347	0·1293105	1·8893767	12080
12160	1·405	0·1515001	1·6664925	1·344	0·1285356	1·8949917	12160
12240	1·403	0·1506991	1·6685460	1·342	0·1277692	1·9006067	12240
12320	1·401	0·1499061	1·6705995	1·340	0·1270110	1·9062217	12320
12400	1·398	0·1491215	1·6726530	1·337	0·1262609	1·9118367	12400
12480	1·396	0·1483450	1·6747065	1·335	0·1255189	1·9174517	12480
12560	1·394	0·1475816	1·6767600	1·333	0·1247849	1·9230667	12560
12640	1·392	0·1468221	1·6788135	1·331	0·1240588	1·9286817	12640
12720	1·389	0·1460701	1·6808670	1·328	0·1233403	·19342967	12720
12800	1·387	0·1453261	1·6829205	1·326	0·1226295	·19399117	12800
12880	1·385	0·1445899	1·6849740	1·324	0·1219261	·19455267	12880
12960	1·383	0·1438610	1·6870275	1·322	0·1212301	·19511417	12960
13040	1·381	0·1431393	1·6890810	1·320	0·1205415	1·9567567	13040
13120	1·378	0·1424253	1·6911345	1·318	0·1198601	1·9623717	13120
13200	1·376	0·1417182	1·6931880	1·316	0·1191857	1·9679867	13200
13280	1·374	0·1410183	1·6952415	1·314	0·1185183	1·9736017	13280
13360	1·371	0·1403255	1·6972950	1·312	0·1178580	1·9792167	13360
13440	1·369	0·1396396	1·6993485	1·310	0·1172045	1·9848317	13440
13520	1·367	0·1389605	1·7014020	1·308	0·1165577	1·9904467	13520
13600	1·365	0·1382881	1·7034555	1·306	0·1159175	1·9960617	13600
13680	1·363	0·1376224	1·7055090	1·304	0·1152839	2·0016767	13680
13760	1·361	0·1369633	1·7075625	1·302	0·1146568	2·0072917	13760
13840	1·359	0·1363107	1·7096160	1·300	0·1140361	2·0129067	13840
13920	1·357	0·1356645	1·7116695	1·298	0·1134217	2·0185217	13920
14000	1·355	0·1350246	1·7137230	1·297	0·1128136	2·0241367	14000
14080	1·353	0·1343910	1·7157765	1·295	0·1122116	2·0297517	14080
14160	1·351	0·1337635	1·7178300	1·293	0·1116157	2·0353667	14160
14240	1·349	0·1331421	1·7198835	1·291	0·1110258	2·0409817	14240
14320	1·347	0·1325268	1·7219370	1·290	0·1104419	2·0465967	14320
14400	1·345	0·1319174	1·7169905	1·288	0·1098638	2·0522117	14400
14480	1·343	0·1313139	1·8520140	1·286	0·1092915	2·0578267	14480
14560	1·341	0·1307162	1·8570975	1·284	0·1087249	2·0634417	14560
14640	1·339	0·1301242	1·8621510	1·283	0·1081639	2·0690567	14640
14720	1·338	0·1295378	1·8672045	1·281	0·1076085	2·0746717	14720
14800	1·336	0·1289570	1·8722580	1·280	0·1070586	2·0802867	14800
14880	1·334	0·1283818	1·8773115	1·278	0·1065141	2·0859017	14880
14960	1·342	0·1278121	1·8823650	1·276	0·1059751	2·0915167	14960

Sine of Inclination (Lower	n = 0275			n = 030			Sine of Inclination (Lower
	N	log N	D	N	log N	D	
11120	1 316	0 1191688	2 0041964	1 264	0 1016388	2 1663960	11120
11200	1 313	0 1183146	2 0103729	1 261	0 1008136	2 1931940	11200
11280	1 311	0 1174704	2 0165494	1 259	0 0999982	2 1998720	11280
11360	1 308	0 1166360	2 0227259	1 257	0 0991925	2 2066100	11360
11440	1 306	0 1158112	2 0289024	1 254	0 0983963	2 2133480	11440
11520	1 303	0 1149959	2 0350789	1 252	0 0976095	2 2200860	11520
11600	1 301	0 1141899	2 0412554	1 250	0 0968320	2 2268240	11600
11680	1 298	0 1133933	2 0474319	1 248	0 0960638	2 2335620	11680
11760	1 296	0 1126056	2 0536084	1 245	0 0953044	2 2403000	11760
11840	1 294	0 1118269	2 0597849	1 243	0 0945537	2 2470380	11840
11920	1 291	0 1110571	2 0659614	1 241	0 0938119	2 2537760	11920
12000	1 289	0 1102959	2 0721879	1 239	0 0930786	2 2605140	12000
12080	1 287	0 1095431	2 0783144	1 237	0 0923538	2 2672520	12080
12160	1 285	0 1087988	2 0844909	1 235	0 0916374	2 2739900	12160
12240	1 283	0 1080629	2 0906674	1 233	0 0909292	2 2807280	12240
12320	1 280	0 1073351	2 0968439	1 231	0 0902290	2 2874660	12320
12400	1 278	0 1066155	2 1030204	1 229	0 0895369	2 2942040	12400
12480	1 276	0 1059037	2 1091969	1 227	0 0888526	2 3009420	12480
12560	1 274	0 1051999	2 1153734	1 225	0 0881761	2 3076800	12560
12640	1 272	0 1045039	2 1215499	1 223	0 0875074	2 3144180	12640
12720	1 270	0 1038154	2 1277264	1 221	0 0868461	2 3211560	12720
12800	1 268	0 1031344	2 1339029	1 220	0 0861922	2 3278940	12800
12880	1 266	0 1024608	2 1400794	1 218	0 0855456	2 3346320	12880
12960	1 264	0 1017945	2 1462559	1 216	0 0849062	2 3413700	12960
13000	1 263	0 1014641	2 1493441	1 215	0 0845892	2 3447390	13000
13040	1 262	0 1011355	2 1524324	1 214	0 0842740	2 3481080	13040
13120	1 260	0 1004836	2 1586089	1 212	0 0836489	2 3548460	13120
13200	1 258	0 0998386	2 1647854	1 211	0 0830306	2 3615840	13200
13280	1 257	0 0992007	2 1709619	1 209	0 0824192	2 3683220	13280
13360	1 255	0 0985696	2 1771384	1 207	0 0818147	2 3750600	13360
13440	1 253	0 0979453	2 1833149	1 206	0 0812167	2 3817980	13440
13520	1 251	0 0973276	2 1894914	1 204	0 0806253	2 3885360	13520
13600	1 249	0 0967164	2 1956679	1 202	0 0800404	2 3952740	13600
13680	1 248	0 0961117	2 2018444	1 201	0 0794619	2 4020120	13680
13760	1 246	0 0955134	2 2080209	1 199	0 0788897	2 4087500	13760
13840	1 244	0 0949215	2 2141974	1 198	0 0783238	2 4154880	13840
13920	1 243	0 0943357	2 2203739	1 196	0 0777640	2 4222260	13920
14000	1 241	0 0937561	2 2265504	1 195	0 0772102	2 4289640	14000
14080	1 239	0 0931826	2 2327269	1 193	0 0766624	2 4357020	14080
14160	1 238	0 0926151	2 2389034	1 192	0 0761206	2 4424400	14160
14240	1 236	0 0920535	2 2450799	1 190	0 0755846	2 4491780	14240
14320	1 235	0 0914978	2 2512564	1 189	0 0750544	2 4559160	14320
14400	1 233	0 0909479	2 2574329	1 187	0 0745299	2 4626540	14400
14480	1 231	0 0904037	2 2636094	1 186	0 0740110	2 4693920	14480
14560	1 230	0 0898653	2 2697859	1 184	0 0734977	2 4761300	14560
14640	1 228	0 0893326	2 2759624	1 183	0 0729898	2 4828680	14640
14720	1 227	0 0888054	2 2821389	1 182	0 0724873	2 4896060	14720
14800	1 225	0 0882838	2 2883154	1 180	0 0719902	2 4963440	14800
14880	1 224	0 0877676	2 2944919	1 179	0 0714984	2 5030820	14880
14960	1 223	0 0872568	2 3006684	1 178	0 0710118	2 5098200	14960

Sine of Inclination 1 over	n = 009			n = 010			Sine of Inclination 1 over
	N	log N	D	N	log N	D	
15000	2 327	0 3668469	75395671	2 163	0 3350453	83772968	15000
15040	2 325	0 3664397	75496741	2 161	0 3346510	83885268	15040
15120	2 321	0 3656296	75698881	2 157	0 3338669	84109868	15120
15200	2 316	0 3648204	75901021	2 153	0 3330886	84334468	15200
15280	2 312	0 3640269	76103161	2 149	0 3323160	84559068	15280
15360	2 308	0 3632342	76305301	2 146	0 3315491	84783668	15360
15440	2 304	0 3624471	76507441	2 142	0 3307878	85008268	15440
15520	2 300	0 3616656	76709581	2 138	0 3300319	85232868	15520
15600	2 296	0 3608895	76911721	2 135	0 3292816	85457468	15600
15680	2 291	0 3601187	77113861	2 131	0 3285365	85682068	15680
15760	2 287	0 3593534	77316001	2 127	0 3277968	85906668	15760
15840	2 283	0 3585934	77518141	2 124	0 3270624	86131268	15840
15920	2 279	0 3578388	77720281	2 120	0 3263333	86355868	15920
16000	2 276	0 3570895	77922421	2 116	0 3256094	86580468	16000
16080	2 272	0 3563451	78124561	2 113	0 3248905	86805068	16080
16160	2 268	0 3556059	78326701	2 109	0 3241767	87029668	16160
16240	2 264	0 3548718	78528841	2 106	0 3234680	87254268	16240
16320	2 260	0 3541428	78730981	2 103	0 3227643	87478868	16320
16400	2 256	0 3534185	78933121	2 099	0 3220654	87703468	16400
16480	2 253	0 3526992	79135261	2 096	0 3213714	87928068	16480
16560	2 249	0 3519848	79337401	2 093	0 3206822	88152668	16560
16640	2 245	0 3512752	79539541	2 089	0 3199978	88377268	16640
16720	2 242	0 3505705	79741681	2 086	0 3193182	88601868	16720
16800	2 238	0 3498704	79943821	2 083	0 3186432	88826468	16800
16880	2 234	0 3491749	80145961	2 080	0 3179728	89051068	16880
16900	2 231	0 3484841	80348101	2 076	0 3173069	89275668	16900
17000	2 229	0 3481402	80449171	2 075	0 3169706	89387968	17000
17040	2 227	0 3477978	80550241	2 073	0 3166405	89500268	17040
17120	2 224	0 3471160	80752381	2 070	0 3159886	89724868	17120
17200	2 220	0 3464387	80954521	2 067	0 3153363	89949468	17200
17280	2 217	0 3457659	81156661	2 064	0 3146883	90174068	17280
17360	2 214	0 3450975	81358801	2 061	0 3140448	90398668	17360
17440	2 210	0 3444334	81560941	2 058	0 3134054	90623268	17440
17520	2 207	0 3437736	81763081	2 055	0 3127704	90847868	17520
17600	2 204	0 3431182	81965221	2 052	0 3121397	91072468	17600
17680	2 200	0 3424670	82167361	2 049	0 3115131	91297068	17680
17760	2 197	0 3418199	82369501	2 046	0 3108906	91521668	17760
17840	2 194	0 3411770	82571641	2 043	0 3102723	91746268	17840
17920	2 190	0 3405380	82773781	2 040	0 3096579	91970868	17920
18000	2 187	0 3399034	82975921	2 037	0 3090477	92195468	18000
18080	2 184	0 3392728	83178061	2 034	0 3084415	92420068	18080
18160	2 181	0 3386461	83380201	2 032	0 3078392	92644668	18160
18240	2 178	0 3380233	83582341	2 029	0 3072408	92869268	18240
18320	2 175	0 3374044	83784481	2 026	0 3066464	93093868	18320
18400	2 172	0 3367894	83986621	2 023	0 3060558	93318468	18400
18480	2 169	0 3361783	84188761	2 021	0 3054690	93543068	18480
18560	2 166	0 3355711	84390901	2 018	0 3048860	93767668	18560
18640	2 163	0 3349676	84593041	2 015	0 3043067	93992268	18640
18720	2 160	0 3343679	84795181	2 012	0 3037310	94216868	18720
18800	2 157	0 3337719	84997321	2 010	0 3031591	94441468	18800

Sine of Inclination (1 over)	n = ·035			n = ·050			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
11120	1·182	0·0725772	2·5507954	1·035	0·0147977	3·6439934	11120
11200	1·180	0·0718025	2·5586564	1·033	0·0141342	3·6552234	11200
11280	1·178	0·0710375	2·5665174	1·032	0·0134800	3·6664534	11280
11360	1·175	0·0702821	2·5743784	1·030	0·0128348	3·6776834	11360
11440	1·174	0·0695359	2·5822394	1·028	0·0121985	3·6889134	11440
11520	1·172	0·0687990	2·5901004	1·027	0·0115710	3·7001434	11520
11600	1·170	0·0680712	2·5979614	1·026	0·0109522	3·7113734	11600
11680	1·168	0·0673524	2·6058224	1·024	0·0103421	3·7226034	11680
11760	1·166	0·0666424	2·6136834	1·023	0·0097404	3·7338334	11760
11840	1·164	0·0659409	2·6215444	1·021	0·0091467	3·7450634	11840
11920	1·162	0·0652482	2·6294054	1·020	0·0085613	3·7562934	11920
12000	1·160	0·0645638	2·6372664	1·019	0·0079839	3·7675234	12000
12080	1·158	0·0638877	2·6451274	1·017	0·0074143	3·7787534	12080
12160	1·157	0·0632198	2·6529884	1·016	0·0068526	3·7899834	12160
12240	1·155	0·0625599	2·6608494	1·015	0·0062986	3·8012134	12240
12320	1·153	0·0619079	2·6687104	1·013	0·0057520	3·8124434	12320
12400	1·151	0·0612638	2·6765714	1·012	0·0052129	3·8236734	12400
12480	1·150	0·0606274	2·6844324	1·011	0·0046811	3·8349034	12480
12560	1·148	0·0599986	2·6922934	1·010	0·0041565	3·8461334	12560
12640	1·147	0·0593774	2·7001544	1·008	0·0036391	3·8573634	12640
12720	1·145	0·0587635	2·7080154	1·007	0·0031286	3·8685934	12720
12800	1·143	0·0581569	2·7158764	1·006	0·0026250	3·8798234	12800
12880	1·142	0·0575573	2·7237374	1·005	0·0021281	3·8910534	12880
12960	1·140	0·0569648	2·7315984	1·004	0·0016379	3·9022834	12960
13000	1·139	0·0566712	2·7355289	1·003	0·0013954	3·9078984	13000
13040	1·138	0·0563793	2·7394594	1·003	0·0011544	3·9135134	13040
13120	1·137	0·0558008	2·7473204	1·002	0·0006774	3·9247434	13120
13200	1·136	0·0552290	2·7551814	1·000	0·0002067	3·9359734	13200
13280	1·134	0·0546638	2·7630424	·9994	1·9997424	3·9472034	13280
13360	1·133	0·0541054	2·7709034	·9983	1·9992844	3·9584334	13360
13440	1·131	0·0535534	2·7787644	·9973	1·9988325	3·9696634	13440
13520	1·130	0·0530079	2·7866254	·9963	1·9983866	3·9808934	13520
13600	1·128	0·0524687	2·7944864	·9953	1·9979467	3·9921234	13600
13680	1·127	0·0519357	2·8023474	·9943	1·9975127	4·0033534	13680
13760	1·126	0·0514088	2·8102084	·9933	1·9970844	4·0145834	13760
13840	1·124	0·0508881	2·8180694	·9923	1·9966619	4·0258134	13840
13920	1·123	0·0503733	2·8259304	·9914	1·9962451	4·0370434	13920
14000	1·122	0·0498645	2·8337914	·9905	1·9958339	4·0482734	14000
14080	1·120	0·0493615	2·8416524	·9895	1·9954281	4·0595034	14080
14160	1·119	0·0488643	2·8495134	·9886	1·9950277	4·0707334	14160
14240	1·118	0·0483728	2·8573744	·9877	1·9946327	4·0819634	14240
14320	1·117	0·0478870	2·8652354	·9868	1·9942430	4·0931934	14320
14400	1·115	0·0474067	2·8730964	·9860	1·9938585	4·1044234	14400
14480	1·114	0·0469318	2·8809574	·9851	1·9934791	4·1156534	14480
14560	1·113	0·0464624	2·8888184	·9842	1·9931048	4·1268834	14560
14640	1·112	0·0459983	2·8966794	·9834	1·9927355	4·1381134	14640
14720	1·111	0·0455394	2·9045404	·9826	1·9923711	4·1493434	14720
14800	1·109	0·0450857	2·9124014	·9818	1·9920115	4·1605734	14800
14880	1·108	0·0446372	2·9202624	·9810	1·9916568	4·1718034	14880
14960	1·107	0·0441939	2·9281234	·9802	1·9913069	4·1830334	14960

Sine of Inclination Lower	n = 000			n = 010			Sine of Inclination Lower
	N	log N	D	N	log N	D	
15000	2 327	0 3668469	75390671	2 163	0 3304[illegible]	83772968	15000
15040	2 325	0 3664397	75490741	2 161	0 3346510	83886268	15040
15120	2 321	0 3656296	75698881	2 157	0 3338663	84109868	15120
15200	2 316	0 3648254	75901021	2 153	0 3330856	84334468	15200
15280	2 312	0 3640269	76103161	2 149	0 3323160	84559068	15280
15360	2 308	0 3632342	76305301	2 146	0 3314491	84783668	15360
15440	2 304	0 3624471	76507441	2 142	0 3307878	85008268	15440
15520	2 300	0 3616655	76709581	2 138	0 3300319	85232868	15520
15600	2 296	0 3608895	76911721	2 135	0 3292816	85457468	15600
15680	2 291	0 3601187	77113861	2 131	0 3285365	85682068	15680
15760	2 287	0 3593534	77316001	2 127	0 3277968	85906668	15760
15840	2 283	0 3585934	77518141	2 124	0 3270621	86131268	15840
15920	2 279	0 3578388	77720281	2 120	0 3263325	86355868	15920
16000	2 276	0 3570895	77922421	2 116	0 3256094	86580468	16000
16080	2 272	0 3563451	78124561	2 113	0 3248905	86805068	16080
16160	2 268	0 3556009	78326701	2 109	0 3241767	87029668	16160
16240	2 264	0 3548718	78528841	2 106	0 3234680	87254268	16240
16320	2 260	0 3541428	78730981	2 103	0 3227643	87478868	16320
16400	2 256	0 3534186	78933121	2 099	0 3220654	87703468	16400
16480	2 253	0 3526992	79135261	2 096	0 3213714	87928068	16480
16560	2 249	0 3519848	79337401	2 093	0 3206822	88152668	16560
16640	2 245	0 3512752	79539541	2 089	0 3199978	88377268	16640
16720	2 242	0 3505705	79741681	2 086	0 3193182	88601868	16720
16800	2 238	0 3498704	79943821	2 083	0 3186432	88826468	16800
16880	2 234	0 3491749	80145961	2 080	0 3179728	89051068	16880
16960	2 231	0 3484841	80348101	2 076	0 3173069	89275668	16960
17040	2 227	0 3477978	80550241	2 073	0 3166456	89500268	17040
17120	2 224	0 3471160	80752381	2 070	0 3159886	89724868	17120
17200	2 220	0 3464387	80954521	2 067	0 3153361	89949468	17200
17280	2 217	0 3457659	81156661	2 064	0 3146883	90174068	17280
17360	2 214	0 3450975	81358801	2 061	0 3140448	90398668	17360
17440	2 210	0 3444334	81560941	2 058	0 3134054	90623268	17440
17520	2 207	0 3437736	81763081	2 055	0 3127701	90847868	17520
17600	2 204	0 3431182	81965221	2 052	0 3121387	91072468	17600
17680	2 200	0 3424670	82167361	2 049	0 3115131	91297068	17680
17760	2 197	0 3418199	82369501	2 046	0 3108906	91521668	17760
17840	2 194	0 3411770	82571641	2 043	0 3102723	91746268	17840
17920	2 190	0 3405380	82773781	2 040	0 3096579	91970868	17920
18000	2 187	0 3399031	82975921	2 037	0 3090477	92195468	18000
18080	2 184	0 3392723	83178061	2 034	0 3084415	92420068	18080
18160	2 181	0 3386454	83380201	2 032	0 3078392	92644668	18160
18240	2 178	0 3380225	83582341	2 029	0 3072408	92869268	18240
18320	2 175	0 3374034	83784481	2 026	0 3066464	93093868	18320
18400	2 172	0 3367884	83986621	2 023	0 3060558	93318468	18400
18480	2 169	0 3361773	84188761	2 021	0 3054690	93543068	18480
18560	2 166	0 3355701	84390901	2 018	0 3048860	93767668	18560
18640	2 163	0 3349670	84593041	2 015	0 3043067	93992268	18640
18720	2 160	0 3343679	84795181	2 012	0 3037310	94216868	18720
18800	2 157	0 3337719	84997321	2 010	0 3031591	94441468	18800

Sine of Inclination (1 over)	n = ·011			n = ·012			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
15000	2·028	0·3071739	·92150264	1·916	0·2824984	1·0052756	15000
15040	2·027	0·3067919	·92273794	1·915	0·2821279	1·0066232	15040
15120	2·023	0·3060321	·92520854	1·912	0·2813910	1·0093184	15120
15200	2·020	0·3052781	·92767914	1·908	0·2806599	1·0120136	15200
15280	2·016	0·3045299	·93014974	1·905	0·2799344	1·0147088	15280
15360	2·013	0·3037872	·93262034	1·902	0·2792145	1·0174040	15360
15440	2·009	0·3030501	·93509094	1·899	0·2785001	1·0200992	15440
15520	2·006	0·3023184	·93756154	1·896	0·2777910	1·0227944	15520
15600	2·003	0·3015921	·94003214	1·893	0·2770874	1·0254896	15600
15680	1·999	0·3008711	·94250274	1·890	0·2763891	1·0281848	15680
15760	1·996	0·3001554	·94497334	1·887	0·2756961	1·0308800	15760
15840	1·993	0·2994450	·94744394	1·884	0·2750082	1·0335752	15840
15920	1·989	0·2987398	·94991454	1·881	0·2743255	1·0362704	15920
16000	1·986	0·2980398	·95238514	1·878	0·2736480	1·0389656	16000
16080	1·983	0·2973448	·95485574	1·875	0·2729754	1·0416608	16080
16160	1·980	0·2966549	·95732634	1·872	0·2723078	1·0443560	16160
16240	1·977	0·2959700	·95979694	1·869	0·2716452	1·0470512	16240
16320	1·974	0·2952899	·96226754	1·866	0·2709874	1·0497464	16320
16400	1·971	0·2946147	·96473814	1·864	0·2703345	1·0524416	16400
16480	1·968	0·2939443	·96720874	1·861	0·2696863	1·0551368	16480
16560	1·965	0·2932787	·96967934	1·858	0·2690429	1·0578320	16560
16640	1·962	0·2926179	·97214994	1·855	0·2684042	1·0605272	16640
16720	1·959	0·2919618	·97462054	1·853	0·2677701	1·0632224	16720
16800	1·956	0·2913103	·97709114	1·850	0·2671405	1·0659176	16800
16880	1·953	0·2906633	·97956174	1·847	0·2665156	1·0686128	16880
16900	1·950	0·2900209	·98203234	1·845	0·2658952	1·0713080	16900
17000	1·949	0·2897013	·98326764	1·843	0·2655865	1·0726556	17000
17040	1·947	0·2893830	·98450294	1·842	0·2652791	1·0740032	17040
17120	1·944	0·2887495	·98697354	1·839	0·2646675	1·0766984	17120
17200	1·941	0·2881204	·98944414	1·837	0·2640604	1·0793936	17200
17280	1·939	0·2874956	·99191474	1·834	0·2634574	1·0820888	17280
17360	1·936	0·2868752	·99438534	1·832	0·2628587	1·0847840	17360
17440	1·933	0·2862591	·99685594	1·829	0·2622643	1·0874792	17440
17520	1·930	0·2856472	·99932654	1·827	0·2616741	1·0901744	17520
17600	1·928	0·2850396	1·0017971	1·824	0·2610881	1·0928696	17600
17680	1·925	0·2844360	1·0042677	1·822	0·2605062	1·0955648	17680
17760	1·922	0·2838365	1·0067383	1·819	0·2599283	1·0982600	17760
17840	1·920	0·2832412	1·0092089	1·817	0·2593544	1·1009552	17840
17920	1·917	0·2826498	1·0116795	1·815	0·2587846	1·1036504	17920
18000	1·915	0·2820625	1·0141501	1·812	0·2582187	1·1063456	18000
18080	1·912	0·2814792	1·0166207	1·810	0·2576568	1·1090408	18080
18160	1·909	0·2808997	1·0190913	1·808	0·2570987	1·1117360	18160
18240	1·907	0·2803241	1·0215619	1·805	0·2565444	1·1144312	18240
18320	1·904	0·2797524	1·0240325	1·803	0·2559940	1·1171264	18320
18400	1·902	0·2791845	1·0265031	1·801	0·2554474	1·1198216	18400
18480	1·899	0·2786203	1·0289737	1·798	0·2549045	1·1225168	18480
18560	1·897	0·2780598	1·0314443	1·796	0·2543652	1·1225120	18560
18640	1·895	0·2775031	1·0339149	1·794	0·2538296	1·1279072	18640
18720	1·892	0·2769502	1·0363855	1·792	0·2532977	1·1306024	18720
18800	1·890	0·2764008	1·0388561	1·790	0·2527695	1·1332976	18800

Sine of Inclination (1 over)	n = ·013			n = ·014			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
15000	1 822	0 2604649	1 0890486	1 740	0 2406464	1 1728215	15000
15040	1 820	0 2601051	1 0905085	1 739	0 2402969	1 1743937	15040
15120	1 817	0 2593899	1 0934283	1 736	0 2396021	1 1775381	15120
15200	1 814	0 2586803	1 0963481	1 733	0 2389129	1 1806825	15200
15280	1 811	0 2579762	1 0992679	1 731	0 2382292	1 1838269	15280
15360	1 808	0 2572777	1 1021877	1 728	0 2375510	1 1869713	15360
15440	1 805	2 2565848	1 1051075	1 725	0 2368782	1 1901157	15440
15520	1 803	0 2558973	1 1080273	1 723	0 2362107	1 1932601	15520
15600	1 800	0 2552151	1 1109471	1 720	0 2355485	1 1964045	15600
15680	1 797	0 2545380	1 1138669	1 717	0 2348914	1 1995489	15680
15760	1 794	0 2538661	1 1167867	1 715	0 2342396	1 2026933	15760
15840	1 791	0 2531994	1 1197065	1 712	0 2335930	1 2058377	15840
15920	1 789	0 2525379	1 1226263	1 710	0 2329514	1 2089821	15920
16000	1 786	0 2518815	1 1255461	1 707	0 2323149	1 2121265	16000
16080	1 783	0 2512300	1 1284659	1 705	0 2316833	1 2152709	16080
16160	1 781	0 2505835	1 1313857	1 702	0 2310566	1 2184153	16160
16240	1 778	0 2499419	1 1343055	1 700	0 2304348	1 2215597	16240
16320	1 775	0 2493051	1 1372253	1 698	0 2298178	1 2247041	16320
16400	1 773	0 2486731	1 1401451	1 695	0 2292055	1 2278485	16400
16480	1 770	0 2480458	1 1430648	1 693	0 2285979	1 2309929	16480
16560	1 768	0 2474232	1 1459847	1 691	0 2279949	1 2341373	16560
16640	1 765	0 2468053	1 1489045	1 688	0 2273966	1 2372817	16640
16720	1 763	0 2461921	1 1518243	1 686	0 2268029	1 2404261	16720
16800	1 760	0 2455834	1 1547441	1 684	0 2262136	1 2435705	16800
16880	1 758	0 2449791	1 1576639	1 681	0 2256288	1 2467149	16880
16900	1 755	0 2443792	1 1605837	1 679	0 2250485	1 2498593	16900
17000	1 754	0 2440808	1 1620436	1 678	0 2247599	1 2514315	17000
17040	1 753	0 2437837	1 1635035	1 677	0 2244725	1 2530037	17040
17120	1 751	0 2431926	1 1664233	1 675	0 2239008	1 2561481	17120
17200	1 748	0 2426059	1 1693431	1 672	0 2233334	1 2592925	17200
17280	1 746	0 2420234	1 1722629	1 670	0 2227702	1 2624369	17280
17360	1 744	0 2414452	1 1751827	1 668	0·2222113	1 2655813	17360
17440	1 741	0 2408713	1 1781025	1 666	0 2216565	1 2687257	17440
17520	1 739	0 2403016	1 1810223	1 664	0 2211058	1 2718701	17520
17600	1 737	0 2397360	1 1839421	1 662	0 2205593	1 2750145	17600
17680	1 734	0 2391743	1 1868619	1 660	0·2200167	1 2781589	17680
17760	1 732	0 2386166	1 1897817	1 658	0 2194781	1 2813033	17760
17840	1 730	0 2380629	1 1927015	1 656	0·2189435	1·2844477	17840
17920	1 728	0·2375132	1 1956213	1 654	0·2184128	1·2875921	17920
18000	1 726	0 2369675	1 1985411	1 652	0·2178861	1·2907365	18000
18080	1 724	0·2364257	1·2014609	1 650	0·2173632	1·2938809	18080
18160	1 721	0·2358877	1·2043807	1 648	0·2168440	1·2970253	18160
18240	1 719	0 2353535	1·2073005	1 646	0·2163286	1 3001697	18240
18320	1 717	0·2348231	1·2102203	1·644	0·2158170	1 3033141	18320
18400	1 715	0·2342964	1·2131401	1·642	0·2153090	1 3064585	18400
18480	1 713	0·2337733	1 2160599	1 640	0·2148047	1 3096029	18480
18560	1·711	0·2332539	1·2189797	1 638	0·2143040	1 3127473	18560
18640	1·709	0·2327380	1·2218995	1 636	0·2138069	1 3158917	18640
18720	1·707	0·2322256	1·2248193	1 634	0·2133134	1 3190361	18720
18800	1 705	0·2317167	1·2277391	1·632	0·2128234	1 3221805	18800

Sine of Inclination (1 over)	n = ·015			n = ·017			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
15000	1·670	0·2227070	1·2565945	1·554	0·1914422	1·4241404	15000
15040	1·669	0·2223671	1·2582790	1·553	0·1911201	1·4260495	15040
15120	1·666	0·2216915	1·2616480	1·551	0·1904800	1·4298677	15120
15200	1·663	0·2210215	1·2650170	1·548	0·1898454	1·4336859	15200
15280	1·661	0·2203570	1·2683860	1·546	0·1892162	1·4375041	15280
15360	1·658	0·2196979	1·2717550	1·544	0·1885924	1·4413223	15360
15440	1·656	0·2190442	1·2751240	1·542	0·1879739	1·4451405	15440
15520	1·653	0·2183958	1·2784930	1·539	0·1873607	1·4489587	15520
15600	1·651	0·2177527	1·2818620	1·537	0·1867526	1·4527769	15600
15680	1·649	0·2171147	1·2852310	1·535	0·1861495	1·4565951	15680
15760	1·646	0·2164818	1·2886000	1·533	0·1855515	1·4604133	15760
15840	1·644	0·2158540	1·2919690	1·531	0·1849585	1·4642315	15840
15920	1·641	0·2152313	1·2953380	1·529	0·1843706	1·4680497	15920
16000	1·639	0·2146136	1·2987070	1·527	0·1837876	1·4718679	16000
16080	1·637	0·2140007	1·3020760	1·525	0·1832093	1·4756861	16080
16160	1·635	0·2133927	1·3054450	1·523	0·1826358	1·4795043	16160
16240	1·632	0·2127896	1·3088140	1·521	0·1820671	1·4833225	16240
16320	1·630	0·2121913	1·3121830	1·519	0·1815031	1·4871407	16320
16400	1·628	0·2115976	1·3155520	1·517	0·1809436	1·4909589	16400
16480	1·626	0·2110086	1·3189210	1·515	0·1803887	1·4947771	16480
16560	1·623	0·2104242	1·3222900	1·513	0·1798384	1·4985953	16560
16640	1·621	0·2098443	1·3256590	1·511	0·1792926	1·5024135	16640
16720	1·619	0·2092690	1·3290280	1·509	0·1787513	1·5062317	16720
16800	1·617	0·2086982	1·3323970	1·507	0·1782144	1·5100499	16800
16880	1·615	0·2081318	1·3357660	1·506	0·1776818	1·5138681	16880
16960	1·613	0·2075697	1·3391350	1·504	0·1771534	1·5176863	16960
17000	1·612	0·2072903	1·3408195	1·503	0·1768908	1·5195954	17000
17040	1·611	0·2070120	1·3425040	1·502	0·1766294	1·5215045	17040
17120	1·609	0·2064586	1·3458730	1·500	0·1761096	1·5253227	17120
17200	1·607	0·2059094	1·3492420	1·498	0·1755940	1·5291409	17200
17280	1·605	0·2053645	1·3526110	1·497	0·1750824	1·5329591	17280
17360	1·603	0·2048237	1·3559800	1·495	0·1745749	1·5367773	17360
17440	1·601	0·2042870	1·3593490	1·493	0·1740715	1·5405955	17440
17520	1·599	0·2037544	1·3627180	1·491	0·1735721	1·5444137	17520
17600	1·597	0·2032259	1·3660870	1·490	0·1730768	1·5482319	17600
17680	1·595	0·2027014	1·3694560	1·488	0·1725853	1·5520501	17680
17760	1·593	0·2021807	1·3728250	1·486	0·1720976	1·5558683	17760
17840	1·591	0·2016639	1·3761940	1·485	0·1716138	1·5596865	17840
17920	1·589	0·2011511	1·3795630	1·483	0·1711338	1·5635047	17920
18000	1·587	0·2006422	1·3829320	1·481	0·1706577	1·5673229	18000
18080	1·585	0·2001371	1·3863010	1·480	0·1701853	1·5711411	18080
18160	1·584	0·1996358	1·3896700	1·478	0·1697166	1·5749593	18160
18240	1·582	0·1991381	1·3930390	1·477	0·1692516	1·5787775	18240
18320	1·580	0·1986442	1·3964080	1·475	0·1687902	1·5825957	18320
18400	1·578	0·1981539	1·3997770	1·473	0·1683323	1·5864139	18400
18480	1·576	0·1976672	1·4031460	1·471	0·1676779	1·5902321	18480
18560	1·575	0·1971841	1·4065150	1·470	0·1674271	1·5940503	18560
18640	1·573	0·1967046	1·4098840	1·469	0·1669798	1·5978685	18640
18720	1·571	0·1962286	1·4132530	1·467	0·1665359	1·6016867	18720
18800	1·569	0·1957561	1·4166220	1·466	0·1660955	1·6055049	18800

Sine of Inclination (1 over)	n = 020			n = 0225			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
15000	1 423	0 1533494	1 6754594	1 341	0 1275293	1 8848918	15000
15040	1 422	0 1530508	1 6777054	1 340	0 1272478	1 8874165	15040
15120	1 421	0 1524576	1 6821974	1 339	0 1266887	1 8924720	15120
15200	1 419	0 1518697	1 6866894	1 337	0 1261349	1 8975255	15200
15280	1 417	0 1512872	1 6911814	1 335	0 1255864	1 9025790	15280
15360	1 415	0 1507099	1 6956734	1 334	0 1250431	1 9076325	15360
15440	1 413	0 1501378	1 7001654	1 332	0 1245049	1 9126860	15440
15520	1 411	0 1495708	1 7046574	1 330	0 1239716	1 9177395	15520
15600	1 409	0 1490089	1 7091494	1 329	0 1234432	1 9227930	15600
15680	1 408	0 1484519	1 7136414	1 327	0 1229198	1 9278465	15680
15760	1 406	0 1478999	1 7181334	1 326	0 1224012	1 9329000	15760
15840	1 404	0 1473528	1 7226254	1 324	0 1218875	1 9379535	15840
15920	1 402	0 1468106	1 7271174	1 322	0 1213786	1 9430070	15920
16000	1 400	0 1462732	1 7316094	1 321	0 1208744	1 9480605	16000
16080	1 399	0 1457404	1 7361014	1 319	0 1203747	1 9531140	16080
16160	1 397	0 1452123	1 7405934	1 318	0 1198796	1 9581675	16160
16240	1 395	0 1446889	1 7450854	1 316	0 1193891	1 9632210	16240
16320	1 394	0 1441700	1 7495774	1 315	0 1189032	1 9682745	16320
16400	1 392	0 1436557	1 7540694	1 313	0 1184216	1 9733280	16400
16480	1 390	0 1431458	1 7585614	1 312	0 1179444	1 9783815	16480
16560	1 389	0 1426403	1 7630534	1 311	0 1174715	1 9834350	16560
16640	1 387	0 1421392	1 7675454	1 309	0 1170030	1 9884885	16640
16720	1 386	0 1416425	1 7720374	1 308	0 1165383	1 9935420	16720
16800	1 384	0 1411501	1 7765294	1 306	0 1160787	1 9985955	16800
16880	1 382	0 1406619	1 7810214	1 305	0 1156228	2 0036490	16880
16960	1 381	0 1401779	1 7855134	1 304	0 1151710	2 0087025	16960
17000	1 380	0 1399384	1 7877594	1 303	0 1149465	2 0112293	17000
17040	1 379	0 1396980	1 7900054	1 302	0 1147233	2 0137560	17040
17120	1 378	0 1392223	1 7944974	1 301	0 1142796	2 0188095	17120
17200	1 376	0 1387507	1 7989894	1 300	0 1138399	2 0238630	17200
17280	1 375	0 1382831	1 8034814	1 298	0 1134041	2 0289165	17280
17360	1 373	0 1378195	1 8079734	1 297	0 1129722	2 0339700	17360
17440	1 372	0 1373598	1 8124654	1 296	0 1225442	2 0390235	17440
17520	1 371	0 1369040	1 8169574	1 295	0 1121200	2 0440770	17520
17600	1 369	0 1364521	1 8214494	1 293	0 1116997	2 0491305	17600
17680	1 368	0 1360040	1 8259414	1 292	0 1112831	2 0541840	17680
17760	1 366	0 1355596	1 8304334	1 291	0 1108701	2 0592375	17760
17840	1 365	0 1351189	1 8349254	1 290	0 1104607	2 0642910	17840
17920	1 364	0 1346820	1 8394174	1 288	0 1100550	2 0693445	17920
18000	1 362	0 1342489	1 8439094	1 287	0 1096530	2 0743980	18000
18080	1 361	0 1338194	1 8484014	1 286	0 1092546	2 0794515	18080
18160	1 360	0 1333934	1 8528934	1 285	0 1088596	2 0845050	18160
18240	1 358	0 1329710	1 8573854	1 284	0 1084681	2 0895585	18240
18320	1 357	0 1325521	1 8618774	1 283	0 1080800	2 0946120	18320
18400	1 356	0 1321367	1 8663694	1 281	0 1076953	2 0996655	18400
18480	1 354	0 1317247	1 8708614	1 280	0 1073140	2 1047190	18480
18560	1 353	0 1313162	1 8753534	1 279	0 1069361	2 1097725	18560
18640	1 352	0 1309110	1 8798454	1 278	0 1065615	2 1148260	18640
18720	1 351	0 1305092	1 8843374	1 277	0 1061901	2 1198795	18720
18800	1 349	0 1301108	1 8888294	1 276	0 1058220	2 1249	

Sine of Inclination (1 over)	n = ·0250			n = ·0275			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
15000	1·276	0·1057076	2·0943242	1·222	0·0870001	2·3037566	15000
15040	1·275	0·1054413	2·0971317	1·221	0·0867476	2·3068449	15040
15120	1·273	0·1049127	2·1027467	1·220	0·0862465	2·3130214	15120
15200	1·272	0·1043894	2·1083617	1·218	0·0857505	2·3191979	15200
15280	1·270	0·1038712	2·1139767	1·217	0·0852595	2·3253744	15280
15360	1·269	0·1033581	2·1195917	1·216	0·0847735	2·3315509	15360
15440	1·267	0·1028500	2·1252067	1·214	0·0842925	2·3377274	15440
15520	1·266	0·1023469	2·1308217	1·213	0·0838164	2·3439039	15520
15600	1·264	0·1018487	2·1364367	1·211	0·0833451	2·3500804	15600
15680	1·263	0·1013552	2·1420517	1·210	0·0828784	2·3562569	15680
15760	1·261	0·1008665	2·1476667	1·209	0·0824164	2·3624334	15760
15840	1·260	0·1003825	2·1532817	1·208	0·0819591	2·3686099	15840
15920	1·259	0·0999032	2·1588967	1·206	0·0815065	2·3747864	15920
16000	1·257	0·0994286	2·1645117	1·205	0·0810585	2·3809629	16000
16080	1·256	0·0989584	2·1701267	1·204	0·0806148	2·3871394	16080
16160	1·255	0·0984928	2·1757417	1·203	0·0801755	2·3933159	16160
16240	1·253	0·0980317	2·1813567	1·202	0·0797407	2·3994924	16240
16320	1·252	0·0975750	2·1869717	1·200	0·0793102	2·4056689	16320
16400	1·251	0·0971225	2·1925867	1·199	0·0788840	2·4118454	16400
16480	1·249	0·0966744	2·1982017	1·198	0·0784620	2·4180219	16480
16560	1·248	0·0962306	2·2038167	1·197	0·0780442	2·4241984	16560
16640	1·247	0·0957910	2·2094317	1·196	0·0776306	2·4303749	16640
16720	1·246	0·0953557	2·2150467	1·195	0·0772211	2·4365514	16720
16800	1·244	0·0949244	2·2206617	1·193	0·0768156	2·4427279	16800
16880	1·243	0·0944972	2·2262767	1·192	0·0764141	2·4489044	16880
16900	1·242	0·0940741	2·2318917	1·191	0·0760166	2·4550809	16900
17000	1·241	0·0938640	2·2346992	1·191	0·0758192	2·4581691	17000
17040	1·241	0·0936549	2·2375067	1·190	0·0756230	2·4612574	17040
17120	1·239	0·0932397	2·2431217	1·189	0·0752332	2·4674339	17120
17200	1·238	0·0928284	2·2487367	1·188	0·0748473	2·4736104	17200
17280	1·237	0·0924209	2·2543517	1·187	0·0744651	2·4797869	17280
17360	1·236	0·0920173	2·2599667	1·186	0·0740868	2·4859634	17360
17440	1·235	0·0916175	2·2655817	1·185	0·0737122	2·4921399	17440
17520	1·234	0·0912213	2·2711967	1·184	0·0733413	2·4983164	17520
17600	1·233	0·0908290	2·2768117	1·183	0·0729741	2·5044929	17600
17680	1·232	0·0904403	2·2824267	1·182	0·0726104	2·5106694	17680
17760	1·230	0·0900552	2·2880417	1·181	0·0722502	2·5168459	17760
17840	1·229	0·0896737	2·2936567	1·180	0·0718935	2·5230224	17840
17920	1·228	0·0892957	2·2992717	1·179	0·0715403	2·5291989	17920
18000	1·227	0·0889213	2·3048867	1·178	0·0711906	2·5353754	18000
18080	1·226	0·0885505	2·3105017	1·177	0·0708444	2·5415519	18080
18160	1·225	0·0881830	2·3161167	1·176	0·0705015	2·5477284	18160
18240	1·224	0·0878189	2·3217317	1·175	0·0701620	2·5539049	18240
18320	1·223	0·0874582	2·3273467	1·174	0·0698258	2·5600814	18320
18400	1·222	0·0871009	2·3329617	1·174	0·0694928	2·5662579	18400
18480	1·221	0·0867468	2·3385767	1·173	0·0691630	2·5724344	18480
18560	1·220	0·0863960	2·3441917	1·172	0·0688364	2·5786109	18560
18640	1·219	0·0860484	2·3498067	1·171	0·0685130	2·5847874	18640
18720	1·218	0·0857040	2·3554217	1·170	0·0681928	2·5909639	18720
18800	1·217	0·0853629	2·3610367	1·169	0·0678757	2·5971404	18800

Speed (feet per sec.)	n = ·030			n = ·035			Speed (feet per sec.)
	N	log. N	D	N	log. N	D	
15400	1·177	0·0707701	2·5131880	1·107	0·0413741	2·9130553	15400
15010	1·176	0·0705503	2·5165580	1·106	0·0411556	2·9165944	15010
15120	1·175	0·0703353	2·5241200	1·105	0·0413321	2·9241854	15120
15200	1·174	0·0699826	2·5300410	1·104	0·0428015	2·9317004	15200
15280	1·173	0·0693164	2·5407720	1·103	0·0426015	2·9317674	15280
15360	1·171	0·0686519	2·5415100	1·102	0·0423509	2·9071281	15360
15440	1·170	0·0681983	2·5502180	1·101	0·0416068	2·9072801	15440
15520	1·169	0·0677165	2·5590860	1·100	0·0411272	2·9081701	15520
15600	1·168	0·0672895	2·5687210	1·099	0·0408223	2·9210111	15600
15680	1·166	0·0668570	2·5701620	1·098	0·0401218	2·9288724	15680
15760	1·165	0·0661102	2·5772000	1·097	0·0400820	3·0087431	15760
15840	1·164	0·0659860	2·5861280	1·096	0·0396311	3·0171441	15840
15920	1·163	0·0655571	2·5906760	1·095	0·0392471	3·0224151	15920
16000	1·162	0·0651632	2·5974110	1·094	0·0388040	3·0243161	16000
16080	1·161	0·0647131	2·6041520	1·093	0·0384880	3·0281771	16080
16160	1·160	0·0642979	2·6108880	1·092	0·0381115	3·0361281	16160
16240	1·158	0·0638568	2·6176280	1·091	0·0377118	3·0384701	16240
16320	1·157	0·0634890	2·6243640	1·090	0·0373754	3·0461041	16320
16400	1·156	0·0630773	2·6311040	1·089	0·0370130	3·0538211	16400
16480	1·155	0·0626788	2·6378420	1·088	0·0366062	3·0614821	16480
16560	1·154	0·0622841	2·6445800	1·087	0·0362024	3·0691161	16560
16640	1·153	0·0618941	2·6513180	1·086	0·0358128	3·0768311	16640
16720	1·152	0·0615080	2·6580560	1·085	0·0354407	3·0846361	16720
16800	1·151	0·0611258	2·6647940	1·085	0·0352610	3·0923301	16800
16880	1·150	0·0607475	2·6715320	1·084	0·0349251	3·1000771	16880
16960	1·149	0·0603731	2·6782700	1·083	0·0345719	3·1216181	16960
17040	1·149	0·0601872	2·6850080	1·082	0·0343127	3·1293789	17040
17040	1·148	0·0600025	2·6850080	1·082	0·0343010	3·1293031	17040
17120	1·147	0·0596357	2·6917460	1·081	0·0339701	3·1370701	17120
17200	1·146	0·0592727	2·6984840	1·080	0·0336186	3·1448311	17200
17280	1·145	0·0589134	2·7052220	1·080	0·0332586	3·1525921	17280
17360	1·144	0·0585577	2·7119600	1·079	0·0329711	3·1603471	17360
17440	1·143	0·0582058	2·7186980	1·078	0·0326216	3·1681141	17440
17520	1·143	0·0578575	2·7254360	1·077	0·0323124	3·1758751	17520
17600	1·142	0·0575125	2·7321740	1·077	0·0320367	3·1836421	17600
17680	1·141	0·0571716	2·7389120	1·076	0·0317141	3·1914071	17680
17760	1·140	0·0568339	2·7456500	1·075	0·0314172	3·1991781	17760
17840	1·139	0·0564995	2·7523880	1·074	0·0311145	3·2069431	17840
17920	1·138	0·0561687	2·7591260	1·074	0·0309251	3·2147091	17920
18000	1·137	0·0558411	2·7658640	1·073	0·0306241	3·2224741	18000
18080	1·136	0·0555172	2·7726020	1·072	0·0303254	3·2302401	18080
18160	1·136	0·0553964	2·7793400	1·072	0·0301277	3·2380061	18160
18240	1·135	0·0550787	2·7860780	1·071	0·0298344	3·2457711	18240
18320	1·134	0·0547640	2·7928160	1·070	0·0295448	3·2535371	18320
18400	1·133	0·0544523	2·7995540	1·069	0·0292587	3·2613031	18400
18480	1·132	0·0541436	2·8062920	1·069	0·0291173	3·2690681	18480
18560	1·131	0·0538378	2·8130300	1·068	0·0288344	3·2768341	18560
18640	1·130	0·0535349	2·8197680	1·067	0·0285548	3·2845991	18640
18720	1·129	0·0532348	2·8265060	1·067	0·0284158	3·2923651	18720

n = ·050							
Sine of Inclination (1 over)	N	log. N	D	Sine of Inclination (1 over)	N	log. N	D
15000	·9798	1·9911337	4·1886484	16900	·9637	1·9839383	4·4637834
15040	·9794	1·9909617	4·1942634	17000	·9634	1·9838151	4·4693984
15120	·9786	1·9906210	4·2054934	17040	·9631	1·9836930	4·4750134
15200	·9779	1·9902849	4·2167234	17120	·9626	1·9834511	4·4862434
15280	·9771	1·9899533	4·2279534	17200	·9621	1·9832126	4·4974734
15360	·9764	1·9896262	4·2391834	17280	·9616	1·9829772	4·5087034
15440	·9757	1·9893035	4·2504134	17360	·9611	1·9827452	4·5199334
15520	·9750	1·9889852	4·2616434	17440	·9606	1·9825164	4·5311634
15600	·9743	1·9886711	4·2728734	17520	·9601	1·9822908	4·5423934
15680	·9736	1·9883612	4·2841034	17600	·9596	1·9820685	4·5536234
15760	·9729	1·9880555	4·2953334	17680	·9591	1·9818493	4·5648534
15840	·9722	1·9877539	4·3065634	17760	·9586	1·9816332	4·5760834
15920	·9715	1·9874565	4·3177934	17840	·9581	1·9814201	4·5873134
16000	·9709	1·9871631	4·3290234	17920	·9577	1·9812100	4·5985434
16080	·9702	1·9868736	4·3402534	18000	·9572	1·9810030	4·6097734
16160	·9696	1·9865880	4·3514834	18080	·9568	1·9807990	4·6210034
16240	·9690	1·9863063	4·3627134	18160	·9563	1·9805979	4·6322334
16320	·9683	1·9860285	4·3739434	18240	·9559	1·9803997	4·6434634
16400	·9677	1·9857544	4·3851734	18320	·9554	1·9802043	4·6546934
16480	·9671	1·9854841	4·3964034	18400	·9550	1·9800117	4·6659234
16560	·9665	1·9852175	4·4076334	18480	·9546	1·9798219	4·6771534
16640	·9659	1·9849545	4·4188634	18560	·9542	1·9796349	4·6883834
16720	·9654	1·9846952	4·4300934	18640	·9538	1·9794506	4·6996134
16800	·9648	1·9844394	4·4413234	18720	·9534	1·9792690	4·7108434
16880	·9642	1·9841871	4·4525534	18800	·9530	1·9790901	4·7220734

Sine of Inclination (1 over	n = 009			n = 010			Sine of Inclination (1 over
	N	log N	D	N	log N	D	
18880	2 154	0 3331797	85199461	2 007	0 3025909	94666068	18880
18960	2 151	0 3325911	85401601	2 005	0 3020263	94890668	18960
19000	2 149	0 3322981	85502671	2 003	0 3017453	95002968	19000
19040	2 148	0 3320060	85603741	2 002	0 3014653	95115268	19040
19120	2 145	0 3314245	85805881	1 999	0 3009078	95339868	19120
19200	2 142	0 3308466	86008021	1 997	0 3003538	95564468	19200
19280	2 139	0 3302722	86210161	1 994	0 2998033	95789068	19280
19360	2 136	0 3297013	86412301	1 992	0 2992562	96013668	19360
19440	2 134	0 3291339	86614441	1 989	0 2987126	96238268	19440
19520	2 131	0 3285698	86816581	1 987	0 2981723	96462868	19520
19600	2 128	0 3280092	87018721	1 984	0 2976354	96687468	19600
19680	2 125	0 3274519	87220861	1 982	0 2971018	96912068	19680
19760	2 123	0 3268979	87423001	1 980	0 2965715	97136668	19760
19840	2 120	0 3263474	87625141	1 977	0 2960446	97361268	19840
19920	2 117	0 3258000	87827281	1 975	0 2955208	97585868	19920
20000	2 115	0 3252560	88029421	1 972	0 2950003	97810468	20000
20080	2 112	0 3247152	88231561	1 970	0 2944830	98035068	20080
20160	2 109	0 3241776	88433701	1 968	0 2939689	98259668	20160
20240	2 107	0 3236431	88635841	1 965	0 2934579	98484268	20240
20320	2 104	0 3231118	88837981	1 963	0 2929500	98708868	20320
20400	2 102	0 3225836	89040121	1 261	0 2924452	98933468	20400
20480	2 099	0 3220585	89242261	1 959	0 2919434	99158068	20480
20560	2 097	0 3215365	89444001	1 956	0 2914447	99382668	20560
20640	2 094	0 3210176	89646501	1 954	0 2909490	99607268	20640
20720	2 092	0 3205017	89848681	1 952	0 2904563	99831868	20720
20800	2 089	0 3199887	90050821	1 950	0 2899665	100056467	20800
20880	2 087	0 3194787	90252961	1 948	0 2894797	100281067	20880
20960	2 084	0 3189717	90455101	1 945	0 2889957	100505667	20960
21040	2 082	0 3184676	90657241	1 943	0 2885147	100730267	21040
21120	2 080	0 3179664	90859381	1 941	0 2880366	100954867	21120

Sine of Inclination I over	n = ·011			n = ·012			Sine of Inclination I over
	N	log. N	D	N	log. N	D	
18880	1·887	0·2752551	1·0413267	1·787	0·2522447	1·1359928	18880
18960	1·885	0·2753129	1·0437973	1·785	0·2517235	1·1386880	18960
19000	1·884	0·2750431	1·0450326	1·784	0·2514643	1·1400356	19000
19040	1·883	0·2747748	1·0462679	1·783	0·2512058	1·1413832	19040
19120	1·880	0·2742391	1·0487385	1·781	0·2506916	1·1440784	19120
19200	1·878	0·2737074	1·0512091	1·779	0·2501808	1·1467736	19200
19280	1·876	0·2731791	1·0536797	1·777	0·2496734	1·1494688	19280
19360	1·874	0·2726542	1·0561503	1·775	0·2491693	1·1521640	19360
19440	1·871	0·2721329	1·0586209	1·773	0·2486687	1·1548592	19440
19520	1·869	0·2716148	1·0610915	1·770	0·2480714	1·1575544	19520
19600	1·867	0·2711001	1·0635621	1·769	0·2476774	1·1602496	19600
19680	1·865	0·2705886	1·0660327	1·767	0·2471866	1·1629448	19680
19760	1·862	0·2700803	1·0685033	1·765	0·2466990	1·1656400	19760
19840	1·860	0·2695755	1·0709739	1·763	0·2462147	1·1683352	19840
19920	1·858	0·2690737	1·0734445	1·761	0·2457335	1·1710304	19920
20000	1·856	0·2685752	1·0759151	1·759	0·2452555	1·1737256	20000
20080	1·854	0·2680798	1·0783857	1·757	0·2447805	1·1764208	20080
20160	1·852	0·2675875	1·0808563	1·755	0·2443087	1·1791160	20160
20240	1·850	0·2670983	1·0833269	1·753	0·2438399	1·1818112	20240
20320	1·848	0·2666122	1·0857975	1·751	0·2433742	1·1845064	20320
20400	1·846	0·2661292	1·0882681	1·749	0·2429116	1·1872016	20400
20480	1·844	0·2656492	1·0907387	1·748	0·2424519	1·1898968	20480
20560	1·842	0·2651722	1·0932093	1·746	0·2419951	1·1925920	20560
20640	1·840	0·2646981	1·0956799	1·744	0·2415412	1·1952872	20640
20720	1·838	0·2642280	1·0981505	1·742	0·2410903	1·1979824	20720
20800	1·836	0·2637589	1·1006211	1·740	0·2406423	1·2006776	20800
20880	1·834	0·2632936	1·1030917	1·739	0·2401972	1·2033728	20880
20960	1·832	0·2628312	1·1055623	1·737	0·2397549	1·2060680	20960
21040	1·829	0·2623717	1·1080329	1·735	0·2393154	1·2087632	21040
21120	1·828	0·2619150	1·1105035	1·733	0·2388787	1·2114584	21120

Sine of Inclination (1 over)	n = 013			n = 014			Sine of Inclination (1 over)
	N	log N	D	N	log N	D	
18880	1 703	0 2312124	1 2306589	1 631	0 2123370	1 3253249	18880
18960	1 701	0 2307110	1 2335787	1 629	0 2118540	1 3284693	18960
19000	1 700	0 2304616	1 2350386	1 628	0 2116137	1 3300415	19000
19040	1 699	0 2302130	1 2364983	1 627	0 2113744	1 3316137	19040
19120	1 697	0 2297184	1 2394183	1 625	0 2108982	1 3347581	19120
19200	1 695	0 2292271	1 2423381	1 623	0 2104254	1 3379025	19200
19280	1 693	0 2287393	1 2452579	1 622	0 2099559	1 3410469	19280
19360	1 691	0 2282548	1 2481777	1 620	0 2094897	1 3441913	19360
19440	1 690	0 2277737	1 2510973	1 618	0 2090268	1 3473357	19440
19520	1 688	0 2272958	1 2540173	1 616	0 2085671	1 3504801	19520
19600	1 686	0 2268212	1 2569371	1 615	0 2081107	1 3536245	19600
19680	1 684	0 2263497	1 2598569	1 613	0 2076575	1 3567689	19680
19760	1 682	0 2258813	1 2627767	1 611	0 2072073	1 3599133	19760
19840	1 680	0 2254162	1 2656965	1 610	0 2067604	1 3630577	19840
19920	1 679	0 2249542	1 2686163	1 608	0 2063165	1 3662021	19920
20000	1 677	0 2244954	1 2715361	1 606	0 2058757	1 3693465	20000
20080	1 675	0 2240397	1 2744559	1 605	0 2054379	1 3724909	20080
20160	1 673	0 2235871	1 2773757	1 603	0 2050032	1 3756353	20160
20240	1 672	0 2231375	1 2802955	1 602	0 2045715	1 3787797	20240
20320	1 670	0 2226908	1 2832153	1 600	0 2041428	1 3819241	20320
20400	1 668	0 2222471	1 2861351	1 599	0 2037170	1 3850685	20400
20480	1 667	0 2218064	1 2890549	1 597	0 2032941	1 3882129	20480
20560	1 665	0 2213687	1 2919747	1 595	0 2028741	1 3913573	20560
20640	1 663	0 2209339	1 2948945	1 594	0 2024571	1 3945017	20640
20720	1 662	0 2205020	1 2978143	1 592	0 2020428	1 3976461	20720
20800	1 660	0 2200728	1 3007341	1 591	0 2016314	1 4007905	20800
20880	1 658	0 2196464	1 3036539	1 589	0 2012227	1 4039349	20880
20960	1 657	0 2192229	1 3065737	1 588	0 2008168	1 4070793	20960
21040	1 655	0 2188022	1 3094935	1 586	0 2004137	1 4102237	21040
21120	1 653	0 2183842	1 3124133	1 585	0 2000133	1 4133681	21120

VALUES OF N, LOG N, AND D

Sine of Inclination (1 over)	n = ·015			n = ·017			Sine of Inclination (1 over)
	N	log. N	D	N	log. N	D	
18880	1·568	0·1952871	1·4199910	1·464	0·1656585	1·6093231	18880
18960	1·566	0·1948216	1·4238600	1·463	0·1652249	1·6131413	18960
19000	1·565	0·1945899	1·4250445	1·462	0·1650092	1·6150504	19000
19040	1·564	0·1943594	1·4267290	1·461	0·1647946	1·6169595	19040
19120	1·563	0·1939005	1·4300980	1·460	0·1643675	1·6207777	19120
19200	1·561	0·1934449	1·4334670	1·459	0·1639437	1·6245959	19200
19280	1·560	0·1929927	1·4368360	1·457	0·1635231	1·6284141	19280
19360	1·558	0·1925437	1·4402050	1·456	0·1631057	1·6322323	19360
19440	1·556	0·1920980	1·4435740	1·454	0·1626916	1·6360505	19440
19520	1·555	0·1916555	1·4469430	1·453	0·1622805	1·6398687	19520
19600	1·553	0·1912162	1·4503120	1·452	0·1618726	1·6436869	19600
19680	1·552	0·1907801	1·4536810	1·450	0·1614678	1·6475051	19680
19760	1·550	0·1903471	1·4570500	1·449	0·1610660	1·6513233	19760
19840	1·549	0·1899172	1·4604190	1·448	0·1606673	1·6551415	19840
19920	1·547	0·1894903	1·4637880	1·446	0·1602715	1·6589597	19920
20000	1·545	0·1890664	1·4671570	1·445	0·1598788	1·6627779	20000
20080	1·544	0·1886457	1·4705260	1·444	0·1594889	1·6665961	20080
20160	1·543	0·1882278	1·4738950	1·442	0·1591020	1·6704143	20160
20240	1·541	0·1878130	1·4772640	1·441	0·1587180	1·6742325	20240
20320	1·540	0·1874011	1·4806330	1·440	0·1583369	1·6780507	20320
20400	1·538	0·1869922	1·4840020	1·439	0·1579587	1·6818689	20400
20480	1·537	0·1865860	1·4873710	1·437	0·1575832	1·6856871	20480
20560	1·535	0·1861827	1·4907400	1·436	0·1572105	1·6895053	20560
20640	1·534	0·1857823	1·4941090	1·435	0·1568406	1·6933235	20640
20720	1·532	0·1853847	1·4974780	1·434	0·1564735	1·6971417	20720
20800	1·531	0·1849898	1·5008470	1·433	0·1561091	1·7009599	20800
20880	1·530	0·1845978	1·5042160	1·431	0·1557474	1·7047781	20880
20960	1·528	0·1842085	1·5075850	1·430	0·1553884	1·7085963	20960
21040	1·527	0·1838219	1·5109540	1·429	0·1550320	1·7124145	21040
21120	1·526	0·1834380	1·5143230	1·428	0·1546782	1·7162327	21120

Sine of Inclination (1 over)	n = 020			n = 0225			Sine of Inclination (1 over)
	N	$\log_e$ N	D	N	$\log_e$ N	D	
18880	1 348	0 1297157	1 8933214	1 275	0 1054572	2 1299865	18880
18960	1 347	0 1293239	1 8978134	1 274	0 1050956	2 1350400	18960
19000	1 346	0 1291290	1 9000594	1 273	0 1049159	2 1375668	19000
19040	1 346	0 1289352	1 9023054	1 273	0 1047371	2 1400935	19040
19120	1 344	0 1285497	1 9067974	1 272	0 1043817	2 1451470	19120
19200	1 343	0 1281674	1 9112894	1 271	0 1040293	2 1502005	19200
19280	1 342	0 1277882	1 9157814	1 270	0 1036800	2 1552540	19280
19360	1 341	0 1274121	1 9202734	1 269	0 1033337	2 1603075	19360
19440	1 340	0 1270392	1 9247654	1 268	0 1029906	2 1653610	19440
19520	1 339	0 1266693	1 9292574	1 267	0 1026504	2 1704145	19520
19600	1 338	0 1263024	1 9337494	1 266	0 1023132	2 1754680	19600
19680	1 336	0 1259385	1 9382414	1 265	0 1019788	2 1805215	19680
19760	1 335	0 1255775	1 9427334	1 264	0 1016472	2 1855750	19760
19840	1 334	0 1252195	1 9472254	1 263	0 1013186	2 1906285	19840
19920	1 333	0 1248643	1 9517174	1 262	0 1009928	2 1956820	19920
20000	1 332	0 1245121	1 9562094	1 261	0 1006699	2 2007355	20000
20080	1 331	0 1241627	1 9607014	1 260	0 1003497	2 2057890	20080
20160	1 330	0 1238162	1 9651934	1 259	0 1000323	2 2108425	20160
20240	1 329	0 1234725	1 9696854	1 258	0 0997176	2 2158960	20240
20320	1 328	0 1231316	1 9741774	1 257	0 0994056	2 2209495	20320
20400	1 327	0 1227935	1 9786694	1 256	0 0990963	2 2260030	20400
20480	1 326	0 1224580	1 9831614	1 255	0 0987897	2 2310565	20480
20560	1 325	0 1221252	1 9876534	1 255	0 0984857	2 2361100	20560
20640	1 324	0 1217951	1 9921454	1 254	0 0981843	2 2411635	20640
20720	1 323	0 1214677	1 9966374	1 253	0 0978855	2 2462170	20720
20800	1 322	0 1211430	2 0011294	1 252	0 0975893	2 2512705	20800
20880	1 321	0 1208207	2 0056214	1 251	0 0972956	2 2563240	20880
20960	1 320	0 1205011	2 0101134	1 250	0 0970045	2 2613775	20960
21040	1 319	0 1201841	2 0146054	1 249	0 0967158	2 2664310	21040
21120	1 318	0 1198696	2 0190974	1 249	0 0964296	2 2714845	21120

VALUES OF N, LOG N, AND D

N	log N	D	N	log N	D	Sine of Inclination Limit
	n = ·025			n = ·0275		
1·216	0·0853249	2·3066517	1·165	0·0675617	2·6663169	18880
1·215	0·0848691	2·3722267	1·167	0·0672508	2·6094931	18960
1·215	0·0848523	2·3730642	1·167	0·0670061	2·6125816	19000
1·214	0·0843853	2·3777847	1·167	0·0666429	2·6156699	19040
1·213	0·0839245	2·3824997	1·166	0·0666379	2·6218461	19120
1·212	0·0834698	2·3872117	1·165	0·0663358	2·6280229	19200
1·212	0·0834540	2·3917206	1·164	0·0660367	2·6311994	19280
1·211	0·0830112	2·3964417	1·163	0·0657405	2·6403759	19360
1·210	0·0825741	2·4010567	1·163	0·0654473	2·6465524	19440
1·209	0·0821426	2·4115717	1·162	0·0651568	2·6527289	19520
1·208	0·0817165	2·4171867	1·161	0·0648692	2·6589054	19600
1·208	0·0816913	2·4228017	1·160	0·0645843	2·6650819	19680
1·206	0·0812705	2·4284167	1·160	0·0643021	2·6712584	19760
1·206	0·0812553	2·4340317	1·159	0·0640229	2·6774349	19840
1·205	0·0808464	2·4396467	1·158	0·0637461	2·6836114	19920
1·204	0·0804424	2·4452617	1·157	0·0634722	2·6897879	20000
1·204	0·0804120	2·4508767	1·157	0·0632009	2·6959644	20080
1·202	0·0800201	2·4564917	1·156	0·0629322	2·7021409	20160
1·202	0·0797814	2·4621067	1·155	0·0626661	2·7083174	20240
1·201	0·0794451	2·4677217	1·155	0·0624026	2·7144939	20320
1·200	0·0791611	2·4733367	1·154	0·0621416	2·7206704	20400
1·199	0·0788802	2·4789517	1·153	0·0618832	2·7268469	20480
1·198	0·0786016	2·4845667	1·152	0·0616273	2·7330234	20560
1·198	0·0783256	2·4901817	1·152	0·0613738	2·7391999	20640
1·197	0·0780522	2·4957967	1·151	0·0611229	2·7453764	20720
1·196	0·0777812	2·5014117	1·150	0·0608744	2·7515529	20800
1·195	0·0775127	2·5070267	1·150	0·0606283	2·7577294	20880
1·195	0·0772466	2·5126417	1·149	0·0603846	2·7639059	20960
1·194	0·0769830	2·5182567	1·149	0·0601433	2·7700824	21040
1·193	0·0767217	2·5238717	1·148	0·0599043	2·7762589	21120

Sine of Inclination (1 over)	n = 030			n = 035			Sine of Inclination 1 over)
	N	log N	D	N	log N	D	
18880	1 128	0 0524527	2 8399820	1 066	0 027 ›941	3 3133124	18880
18960	1 128	0 0521633	2 8467200	1 06›	0 027 3416	3 3211734	18960
19000	1 127	0 0520196	2 8500800	1 065	0 0272164	3 3251038	19000
19040	1 127	0 0›18767	2 8›34580	1 064	0 0270920	3 3›90344	19040
19120	1 126	0 0›15932	2 8601960	1 064	0 026846›2	3 3368904	19120
19200	1 125	0 0 ›13124	2 8669340	1 063	0 0266011	3 3447564	19200
19280	1 125	0 0 ›10345	2 8736720	1 063	0 0263 ›98	3 3526174	19280
19360	1 124	0 0507594	2 8804100	1 062	0 0261212	3 3604784	19360
19440	1 123	0 0›04873	2 8871480	1 061	0 025854	3 3683394	19440
19520	1 123	0 0502179	2 8938860	1 061	0 025›522	3 3762004	19›20
19600	1 122	0 0499›13	2 9006240	1 060	0 025›4217	3 3840614	19600
19680	1 121	0 0496874	2 9073620	1 060	0 0251939	3 3919224	19680
19760	1 121	0 0494261	2 9141000	1 0›9	0 024968›	3 3997834	19760
19840	1 120	0 0491676	2 9208380	1 0›9	0 0247458	3 4076444	19840
19920	1 119	0 0489116	2 9275760	1 058	0 0245256	3 415›0›4	19920
20000	1 119	0 0486584	2 9343140	1 0›8	0 0243080	3 4233664	20000
20080	1 118	0 0484077	2 9410›20	1 057	0 0240928	3 4312274	20080
20160	1 117	0 0481596	2 9477900	1 057	0 0238801	3 4390884	20160
20240	1 117	0 0479140	2 9545280	1 056	0 0236698	3 4469494	20240
20320	1 116	0 0476710	2 9612660	1 056	0 0234620	3 4548104	20320
20400	1 115	0 0474›0›	2 96›0040	1 05›	0 023››66	3 46›6714	20400
20480	1 115	0 0471925	2 9747420	1 0›5	0 0230 36	3 4705324	20480
20›60	1 114	0 0469569	2 9814800	1 054	0 0228›29	3 4783934	20›60
20640	1 114	0 0467237	2 9882180	1 0›4	0 0226545	3 4862544	20640
20720	1 113	0 0464930	2 9949560	1 053	0 022458›	3 4941154	20720
20800	1 112	0 0462646	3 0016940	1 0›3	0 0222647	3 5019764	20800
20880	1 112	0 0460386	3 0084320	1 0›2	0 0220731	3 5098374	20880
20960	1 111	0 045›6149	3 0151700	1 052	0 0218838	3 ›176984	20960
21040	1 111	0 045›935	3 0219080	1 051	0 0216968	3 ›2› ››94	21040
21120	1 110	0 045›744	3 0286460	1 051	0 021 ›119	3 ›334204	21120

n = 050							
Sine of Inclination (1 over	N	log N	D	Sine of Inclination 1 over	N	log N	D
18880	9 ›26	1 9789140	4 7333034	20000	9478	1 9767096	4 890 ›234
18960	9›22	1 978740›	4 7445334	20080	9475	1 976 698	4 9017›34
19000	9›20	1 9786›45	4 7501484	20160	9472	1 9764323	4 9129834
19040	9›19	1 9785694	4 7››7634	20240	9469	1 9762970	4 9242134
19120	9 ›1 ›	1 9784010	4 7669934	20320	9466	1 9761639	4 9354434
19›00	9511	1 9782351	4 7782234	20400	9463	1 9760330	4 9466734
19280	9508	1 9780717	4 7894534	20480	9460	1 9759042	4 9›79034
19360	9›04	1 9779107	4 8006834	20›60	945›	1 97›7775	4 9691334
19440	9›01	1 9777 ›23	4 8119134	20640	945 ›	1 97›6529	4 9803634
19›20	9497	1 9775962	4 8231434	207›0	94 ›2	1 97 ›5304	4 991›934
19600	9494	1 9774426	4 8343734	20800	94›0	1 9754093	5 0028234
19680	9491	1 9772914	4 8456034	20880	9447	1 97 ›2914	› 0140 ›34
19760	9487	1 9771424	4 8›68334	20960	9444	1 97›17 0	› 02›2834
19840	9484	1 97699›9	4 8680634	21040	9442	1 9750606	› 036›134
199›0	9481	1 9768›16	4 8792934	21120	9439	1 9749481	› 0477434

TABLE II —*continued*

Depth on Invert — by Diameter	(R) Hydraulic Mean Depth = (*d*) × by	log$_{10}$ (R.)	(A) Area of Section = (d)^2 × by	log (A)
51	2531476	I 4033733	402698	I 6049860
52	2562031	I 4085844	412694	I 6156281
53	2591626	I 4135724	422681	I 6260127
54	2621200	I 4185003	432656	I 6361427
55	2648858	I 4230488	442615	I 6460261
56	2676119	I 4273055	452553	I 6556714
57	2702514	I 4317680	462470	I 6650836
58	2728035	I 4358501	472366	I 6742694
59	2753687	I 4397469	482211	I 6832371
60	2776532	I 4435128	492028	I 6919808
61	2799297	I 4470431	501805	I 7005351
62	2822242	I 4506440	511537	I 7088771
63	2842208	I 4536836	521119	I 7170202
64	2862434	I 4567203	530847	I 7249693
65	2881476	I 4596152	540418	I 7327298
66	2899644	I 4623447	549925	I 7403035
67	2916826	I 4649106	559364	I 7476945
68	2932914	I 4673054	568732	I 7549076
69	2948185	I 4696248	578022	I 7619444
70	2962346	I 4716858	587230	I 7688082
71	2976439	I 4737511	596350	I 7755012
72	2987462	I 4753026	605378	I 7820267
73	2998390	I 4768883	614308	I 7883862
74	3008204	I 4783074	623135	I 7945822
75	3016891	I 4795768	631852	I 8006164
76	3024360	I 4806333	640453	I 8064872
77	3030650	I 4815538	648933	I 8121999
78	3035695	I 4822483	657284	I 8177530
79	3039472	I 4827982	665500	I 8231481
80	3041912	I 4831466	673574	I 8283827
81	3043027	I 4833053	681498	I 8334646
82	3042710	I 4832600	689263	I 8383850
83	3040920	I 4830050	696862	I 8431467
84	3037602	I 4825303	704286	I 8477491
85	3032608	I 4818249	711523	I 8521889
86	3026047	I 4808758	718566	I 8564661
87	3017033	I 4796666	725399	I 8605770
88	3007313	I 4781787	732013	I 8646188
89	2994940	I 4763891	738392	I 8682870
90	2980366	I 4742037	744523	I 8718782
91	2963368	I 4717856	750386	I 8752848
92	2943689	I 4688320	755963	I 8785000
93	2920992	I 4653030	761230	I 8815150
94	2894816	I 4616210	766159	I 8843189
95	2864985	I 4571226	770717	I 8868949
96	2829115	I 4516507	774860	I 8892232
97	2787014	I 4451313	778532	I 8912765
98	2735143	I 4369801	781649	I 8930118
99	2673989	I 4271507	784186	I 8942413
100	2605487	I 4161760	784063	I 8943143
101	2657104	I 4244086	784263	I 8944618
102	2647947	I 4229034	784446	I 8945681
103	2638795	I 4214703	784619	I 8946688
104	2627739	I 4196823	784779	I 8947474
105	2616130	I 4178326	784927	I 8948233
106	2603835	I 4156135	785061	I 8949032
107	2589645	I 4132404	785179	I 8949687
108	2572897	I 4104224	785279	I 8950240
109	2552494	I 3983730	785356	I 8950665
1 000	2500000	I 3979400	785398	I 8950899

TABLE III.—PIPE THREE INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·003	·00016	$\bar{4}$·2197877	·01287	·000002	$\bar{6}$·4191293
·002	·006	·00033	$\bar{4}$·5217979	·01823	·000007	$\bar{6}$·8714270
·003	·009	·00039	$\bar{4}$·5985754	·01991	·000013	$\bar{5}$·1363211
·004	·012	·00066	$\bar{4}$·8232219	·02579	·000021	$\bar{5}$·3235099
·005	·015	·00083	$\bar{4}$·9202688	·02884	·000029	$\bar{5}$·4689009
·006	·018	·00099	$\bar{4}$·9990899	·03158	·000038	$\bar{5}$·5875706
·007	·021	·00115	$\bar{3}$·0607680	·03391	·000048	$\bar{5}$·6874175
·008	·024	·00132	$\bar{3}$·1234227	·03645	·000059	$\bar{5}$·7745169
·009	·027	·00149	$\bar{3}$·1741325	·03864	·000071	$\bar{5}$·8508759
·010	·030	·00165	$\bar{3}$·2197090	·04072	·000083	$\bar{5}$·9194050
·011	·033	·00182	$\bar{3}$·2609568	·04270	·000096	$\bar{5}$·9814222
·02	·06	·00330	$\bar{3}$·5188531	·05746	·000234	$\bar{4}$·3697954
·03	·09	·00493	$\bar{3}$·6928576	·07021	·000429	$\bar{4}$·6325838
·04	·12	·00652	$\bar{3}$·8147013	·08078	·000659	$\bar{4}$·8186382
·05	·15	·00812	$\bar{3}$·9100686	·09016	·000917	$\bar{4}$·9626356
·06	·18	·00971	$\bar{3}$·9875755	·09857	·001202	$\bar{3}$·0800625
·07	·21	·01128	$\bar{2}$·0523991	·10621	·001510	$\bar{3}$·1791207
·08	·24	·01283	$\bar{2}$·1082623	·10327	·001839	$\bar{3}$·2647440
·09	·27	·01436	$\bar{2}$·1572647	·11984	·002188	$\bar{3}$·3400969
·10	·30	·01587	$\bar{2}$·2008486	·12601	·002554	$\bar{3}$·4073378
·11	·33	·01738	$\bar{2}$·2400614	·13183	·002937	$\bar{3}$·4680333
·12	·36	·01886	$\bar{2}$·2756434	·13734	·003336	$\bar{3}$·5232992
·13	·39	·02033	$\bar{2}$·3081893	·14259	·003749	$\bar{3}$·5740240
·14	·42	·02178	$\bar{2}$·3381392	·14762	·004177	$\bar{3}$·6208710
·15	·45	·02321	$\bar{2}$·3658530	·15237	·004617	$\bar{3}$·6643775
·16	·48	·02463	$\bar{2}$·3916077	·15696	·005069	$\bar{3}$·7049651
·17	·51	·02604	$\bar{2}$·4156526	·16137	·005533	$\bar{3}$·7429999
·18	·54	·02742	$\bar{2}$·4381694	·16560	·006008	$\bar{3}$·7787615
·19	·57	·02879	$\bar{2}$·4593235	·16969	·006494	$\bar{3}$·8124955
·20	·60	·03014	$\bar{2}$·4792574	·17363	·006989	$\bar{3}$·8444150
·21	·63	·03148	$\bar{2}$·4980845	·17743	·007493	$\bar{3}$·8746921
·22	·66	·03280	$\bar{2}$·5159045	·18111	·008007	$\bar{3}$·9034766
·23	·69	·03410	$\bar{2}$·5328056	·18467	·008529	$\bar{3}$·9309013
·24	·72	·03538	$\bar{2}$·5488669	·18811	·009059	$\bar{3}$·9570833
·25	·75	·03665	$\bar{2}$·5641498	·19156	·009596	$\bar{3}$·9821185
·26	·78	·03790	$\bar{2}$·5787186	·19469	·010141	$\bar{2}$·0060995
·27	·81	·03914	$\bar{2}$·5926236	·19783	·010693	$\bar{2}$·0291046
·28	·84	·04035	$\bar{2}$·6059091	·20088	·011251	$\bar{2}$·0512008
·29	·87	·04155	$\bar{2}$·6186179	·20384	·011815	$\bar{2}$·0724521
·30	·90	·04273	$\bar{2}$·6307859	·20672	·012385	$\bar{2}$·0929135
·31	·93	·04399	$\bar{2}$·6424525	·20976	·012961	$\bar{2}$·1126385
·32	·96	·04504	$\bar{2}$·6536358	·21223	·013541	$\bar{2}$·1316708
·33	·99	·04617	$\bar{2}$·6643750	·21487	·014127	$\bar{2}$·1500538
·34	1·02	·04728	$\bar{2}$·6746876	·21744	·014717	$\bar{2}$·1678211
·35	1·05	·04837	$\bar{2}$·6846015	·21993	·015311	$\bar{2}$·1850106
·36	1·08	·04944	$\bar{2}$·6941371	·22236	·015909	$\bar{2}$·2016548
·37	1·11	·05050	$\bar{2}$·7033059	·22472	·016511	$\bar{2}$·2177783
·38	1·14	·05153	$\bar{2}$·7121315	·22702	·017116	$\bar{2}$·2334102
·39	1·17	·05255	$\bar{2}$·7206295	·22925	·017724	$\bar{2}$·2485755
·40	1·20	·05355	$\bar{2}$·7366953	·23062	·018335	$\bar{2}$·2775905
·41	1·23	·05453	$\bar{2}$·7366953	·23353	·018949	$\bar{2}$·2775905
·42	1·26	·05549	$\bar{2}$·7442913	·23558	·019565	$\bar{2}$·2914826
·43	1·29	·05644	$\bar{2}$·7516083	·23757	·020183	$\bar{2}$·3049857
·44	1·32	·05736	$\bar{2}$·7586602	·23951	·020802	$\bar{2}$·3181194
·45	1·35	·05827	$\bar{2}$·7654565	·24139	·021423	$\bar{2}$·3308993
·46	1·38	·05914	$\bar{2}$·7719224	·24319	·022046	$\bar{2}$·3433372
·47	1·41	·06002	$\bar{2}$·7783462	·24500	·022669	$\bar{2}$·3554479
·48	1·44	·06086	$\bar{2}$·7843899	·24671	·023294	$\bar{2}$·3672440
·49	1·47	·06169	$\bar{2}$·7902440	·24838	·023919	$\bar{2}$·3787385
·50	1·50	·06250	$\bar{2}$·7958800	·25000	·024543	$\bar{2}$·3899399

TABLE III —*continued*

Depth on In vert — by Diameter	Depth on In vert in Ins	Hydraulic Mean Depth R in Feet	log (R)	√R in Feet	Area of Cross Section in Square Feet	log (A)
51	1 53	06328	2 8013139	25106	025168	2 4008605
52	1 56	06405	2 8065244	25308	025793	2 4115081
53	1 59	06479	2 8115124	25454	026417	2 4218927
54	1 62	06553	2 8164403	25598	027041	2 4320227
55	1 65	06622	2 8209988	25733	027663	2 4419061
56	1 68	06690	2 8254455	25865	028284	2 4515514
57	1 71	06756	2 8297080	25992	028904	2 4609636
58	1 74	06820	2 8337901	26106	029522	2 4701494
59	1 77	06884	2 8377960	26237	030138	2 4791171
60	1 80	06941	2 8414528	26346	030752	2 4878698
61	1 83	06998	2 8449891	26454	031363	2 4964151
62	1 86	07055	2 8483805	26562	031971	2 5047571
63	1 89	07105	2 8516036	26656	032601	2 5129002
64	1 92	07155	2 8546603	26750	033178	2 5208493
65	1 95	07203	2 8575552	26839	033776	2 5286098
66	1 98	07249	2 8602847	26924	034370	2 5361835
67	2 01	07292	2 8628506	27003	034960	2 5435745
68	2 04	07332	2 8652454	27078	035546	2 5507876
69	2 07	07370	2 8674948	27148	036126	2 5578244
70	2 10	07405	2 8695758	27213	036702	2 5646882
71	2 13	07438	2 8714911	27273	037272	2 5713812
72	2 16	07468	2 8732429	27328	037836	2 5779067
73	2 19	07495	2 8748283	27378	038394	2 5842662
74	2 22	07520	2 8762474	27423	038946	2 5904622
75	2 25	07542	2 8774968	27463	039491	2 5964954
76	2 28	07560	2 8785731	27497	040028	2 6023672
77	2 31	07576	2 8794778	27526	040558	2 6080799
78	2 34	07589	2 8801983	27548	041080	2 6136330
79	2 37	07598	2 8807382	27565	041594	2 6190281
80	2 40	07604	2 8810866	27576	042198	2 6242627
81	2 43	07607	2 8812453	27581	042594	2 6293446
82	2 46	07606	2 8812005	27580	043079	2 6342650
83	2 49	07602	2 8809450	27572	043561	2 6390267
84	2 52	07594	2 8804709	27557	044017	2 6436291
85	2 55	07581	2 8797649	27534	044470	2 6480685
86	2 58	07565	2 8788158	27504	044916	2 6523461
87	2 61	07544	2 8776066	27466	045337	2 6564570
88	2 64	07518	2 8761187	27419	045751	2 6603988
89	2 67	07487	2 8743291	27363	046149	2 6641670
90	2 70	07450	2 8722097	27296	046533	2 6677582
91	2 73	07408	2 8697256	27218	046899	2 6711648
92	2 76	07359	2 8668320	27128	047248	2 6743805
93	2 79	07302	2 8634705	27023	047577	2 6773959
94	2 82	07237	2 8596610	26901	047885	2 6801989
95	2 85	07162	2 8552626	26762	048163	2 6827749
96	2 88	07072	2 8499907	26594	048429	2 6851032
97	2 91	06967	2 8438793	26396	048658	2 6871565
98	2 94	06837	2 8369201	26149	048853	2 6888918
989	2 967	06684	2 8280917	25855	048991	2 6901213
990	2 970	06663	2 8267169	25814	049004	2 6902343
991	2 973	06642	2 8253486	25773	049016	2 6903418
992	2 976	06619	2 8238494	25729	049028	2 6904451
993	2 979	06599	2 8225103	25683	049039	2 6905388
994	2 982	06569	2 8205223	25630	049049	2 6906274
995	2 985	06540	2 8186326	25575	049058	2 6907053
996	2 988	06509	2 8166135	25513	049066	2 6907832
997	2 991	06474	2 8111804	25444	049073	2 6908487
998	2 994	06432	2 8083624	25303	0490	
999	2 997	06256	2 7963130	25070	04	
1 000	3 000	06250	2 7958800	25000	04	

TABLE IV.—PIPE FOUR INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·004	·00022	$\bar{4}$·3447264	·01487	·000004	$\bar{6}$·6690068
·002	·008	·00044	$\bar{4}$·6467366	·02105	·000013	$\bar{5}$·1213045
·003	·012	·00052	$\bar{4}$·7235141	·02300	·000024	$\bar{5}$·3861986
·004	·016	·00088	$\bar{4}$·9481606	·02979	·000037	$\bar{5}$·5733874
·005	·020	·00110	$\bar{3}$·0452075	·03331	·000052	$\bar{5}$·7187784
·006	·024	·00133	$\bar{3}$·1240286	·03647	·000068	$\bar{5}$·8374481
·007	·028	·00153	$\bar{3}$·1857067	·03916	·000086	$\bar{5}$·9372950
·008	·032	·00177	$\bar{3}$·2483614	·04208	·000106	$\bar{4}$·0243944
·009	·036	·00199	$\bar{3}$·2990712	·04462	·000126	$\bar{4}$·1007534
·010	·040	·00221	$\bar{3}$·3446477	·04702	·000147	$\bar{4}$·1692825
·011	·044	·00243	$\bar{3}$·3858955	·04931	·000170	$\bar{4}$·2312997
·02	·08	·00440	$\bar{3}$·6437918	·06635	·000416	$\bar{4}$·6196729
·03	·12	·00657	$\bar{3}$·8177963	·08107	·000763	$\bar{4}$·8824613
·04	·16	·00870	$\bar{3}$·9396400	·09320	·001171	$\bar{3}$·0685157
·05	·20	·01083	$\bar{2}$·0350073	·10411	·001632	$\bar{3}$·2125131
·06	·24	·01295	$\bar{2}$·1125142	·11383	·002137	$\bar{3}$·3299400
·07	·28	·01504	$\bar{2}$·1773378	·12265	·002685	$\bar{3}$·4289982
·08	·32	·01710	$\bar{2}$·2332010	·13079	·003270	$\bar{3}$·5146215
·09	·36	·01915	$\bar{2}$·2822034	·13836	·003890	$\bar{3}$·5899744
·10	·40	·02117	$\bar{2}$·3257873	·14551	·004542	$\bar{3}$·6572153
·11	·44	·02317	$\bar{2}$·3650001	·15222	·005223	$\bar{3}$·7179108
·12	·48	·02515	$\bar{2}$·4005821	·15859	·005932	$\bar{3}$·7731767
·13	·52	·02710	$\bar{2}$·4331280	·16465	·006666	$\bar{3}$·8239015
·14	·56	·02886	$\bar{2}$·4630779	·17042	·007426	$\bar{3}$·8707485
·15	·60	·03095	$\bar{2}$·4907917	·17595	·008208	$\bar{3}$·9142550
·16	·64	·03285	$\bar{2}$·5165464	·18124	·009012	$\bar{3}$·9548426
·17	·68	·03472	$\bar{2}$·5405913	·18633	·009837	$\bar{3}$·9928774
·18	·72	·03658	$\bar{2}$·5631081	·19122	·010682	$\bar{2}$·0286390
·19	·76	·03839	$\bar{2}$·5842622	·19594	·011544	$\bar{2}$·0623730
·20	·80	·04019	$\bar{2}$·6041961	·20049	·012425	$\bar{2}$·0942925
·21	·84	·04197	$\bar{2}$·6230232	·20488	·013322	$\bar{2}$·1245696
·22	·88	·04323	$\bar{2}$·6408432	·20913	·014235	$\bar{2}$·1533541
·23	·92	·04547	$\bar{2}$·6577443	·21324	·015152	$\bar{2}$·1807788
·24	·96	·04718	$\bar{2}$·6738056	·21722	·016105	$\bar{2}$·2069608
·25	1·00	·04887	$\bar{2}$·6890885	·22107	·017061	$\bar{2}$·2319960
·26	1·04	·05054	$\bar{2}$·7036573	·22532	·018029	$\bar{2}$·2559770
·27	1·08	·05099	$\bar{2}$·7175623	·22582	·019010	$\bar{2}$·2789821
·28	1·12	·05380	$\bar{2}$·7308478	·23196	·020002	$\bar{2}$·3010783
·29	1·16	·05540	$\bar{2}$·7435566	·23538	·021005	$\bar{2}$·3223296
·30	1·20	·05698	$\bar{2}$·7557246	·23870	·022018	$\bar{2}$·3427910
·31	1·24	·05853	$\bar{2}$·7673912	·24193	·023042	$\bar{2}$·3625160
·32	1·28	·06005	$\bar{2}$·7785745	·24506	·024074	$\bar{2}$·3815493
·33	1·32	·05156	$\bar{2}$·7893137	·24811	·025115	$\bar{2}$·3999313
·34	1·36	·06304	$\bar{2}$·7996263	·25108	·026164	$\bar{2}$·4176986
·35	1·40	·06448	$\bar{2}$·8095402	·25396	·027220	$\bar{2}$·4348881
·36	1·44	·06592	$\bar{2}$·8190758	·25676	·028283	$\bar{2}$·4515323
·37	1·48	·06733	$\bar{2}$·8282446	·25948	·029353	$\bar{2}$·4676558
·38	1·52	·06871	$\bar{2}$·8370702	·26214	·030429	$\bar{2}$·4832877
·39	1·56	·07008	$\bar{2}$·8455682	·26471	·031510	$\bar{2}$·4984530
·40	1·60	·07141	$\bar{2}$·8616340	·26722	·032596	$\bar{2}$·5274680
·41	1·64	·07271	$\bar{2}$·8616340	·26966	·033687	$\bar{2}$·5274680
·42	1·68	·07399	$\bar{2}$·8692300	·27202	·034782	$\bar{2}$·5413601
·43	1·72	·07525	$\bar{2}$·8765470	·27433	·035881	$\bar{2}$·5548632
·44	1·76	·07648	$\bar{2}$·8835989	·27656	·036982	$\bar{2}$·5679969
·45	1·80	·07769	$\bar{2}$·8903952	·27873	·038087	$\bar{2}$·5807768
·46	1·84	·07886	$\bar{2}$·8968611	·28082	·039194	$\bar{2}$·5932147
·47	1·88	·08003	$\bar{2}$·9032849	·28290	·040302	$\bar{2}$·6053254
·48	1·92	·08115	$\bar{2}$·9093286	·28488	·041411	$\bar{2}$·6171215
·49	1·96	·08225	$\bar{2}$·9151827	·28680	·042522	$\bar{2}$·6286160
·50	2·00	·08333	$\bar{2}$·9208187	·28867	·043633	$\bar{2}$·6398174

TABLE IV —*continued*

Depth on Inv ert — by Diameter	Depth on Invert in Feet	Hydraulic Mean Depth R in Feet	log (R)	AR in Feet	Area of Cross Section in Square Feet	log (A)
.51	2.04	.08438	2.9262526	.29048	.014744	2.0507417
.52	2.08	.08540	2.9314631	.29223	.015055	2.0611858
.53	2.12	.08638	2.9364511	.29391	.015361	2.0717702
.54	2.16	.08737	2.9413790	.29559	.015671	2.0819002
.55	2.20	.08829	2.9459375	.29714	.015973	2.0917845
.56	2.24	.08920	2.9503842	.29867	.016284	2.1014284
.57	2.28	.09218	2.9546467	.30014	.016585	2.1108411
.58	2.32	.09093	2.9587298	.30155	.016884	2.1200261
.59	2.36	.09175	2.9626476	.30291	.017179	2.1289916
.60	2.40	.09253	2.9663917	.30424	.017473	2.1377473
.61	2.44	.09330	2.9699278	.30546	.017776	2.1462920
.62	2.48	.09404	2.9733102	.30666	.018087	2.1546116
.63	2.52	.09474	2.9766423	.30780	.018401	2.1627777
.64	2.56	.09541	2.9798330	.30883	.018684	2.1707268
.65	2.60	.09604	2.9824339	.30991	.019018	2.1784873
.66	2.64	.09665	2.9852234	.31089	.019314	2.1860610
.67	2.68	.09722	2.9877893	.31181	.019621	2.1934520
.68	2.72	.09776	2.9901841	.31267	.019892	2.2006651
.69	2.76	.09827	2.9924333	.31348	.020222	2.2077019
.70	2.80	.09874	2.9944145	.31423	.020548	2.2145657
.71	2.84	.09918	2.9964238	.31493	.020861	2.2212587
.72	2.88	.09958	2.9981812	.31556	.021264	2.2277812
.73	2.92	.09971	2.9997670	.31577	.021476	2.2341437
.74	2.96	.10027	3.0011861	.31642	.021837	2.2403487
.75	3.00	.10056	3.0024359	.31711	.022206	2.2463749
.76	3.04	.10081	3.0034122	.31770	.022564	2.2522447
.77	3.08	.10102	3.0041414	.31784	.022863	2.2579574
.78	3.12	.10119	3.0047370	.31840	.023231	2.2636105
.79	3.16	.10131	3.0050763	.31890	.023614	2.2691076
.80	3.20	.10139	3.0052253	.31842	.024041	2.2744402
.81	3.24	.10143	3.0051846	.31848	.024522	2.2797221
.82	3.28	.10142	3.0050132	.31847	.024944	2.2848475
.83	3.32	.10139	3.0047237	.31837	.025429	2.2898812
.84	3.36	.10135	3.0043076	.31821	.025924	2.2948288
.85	3.40	.10132	3.0040702	.31794	.026454	2.2996961
.86	3.44	.10134	3.0039744	.31776	.026940	2.3044880
.87	3.48	.10141	3.0042542	.31773	.027459	2.3092105
.88	3.52	.10154	3.0048074	.31801	.028003	2.3138693
.89	3.56	.10173	3.0056273	.31850	.028560	2.3184705
.90	3.60	.10198	3.0066984	.31918	.029126	2.3230197
.91	3.64	.10227	3.0079963	.32004	.029700	2.3275229
.92	3.68	.10262	3.0095177	.32108	.030284	2.3319858
.93	3.72	.10302	3.0112492	.32228	.030877	2.3364144
.94	3.76	.10347	3.0131845	.32364	.031480	2.3408144
.95	3.80	.10397	3.0153113	.32516	.032093	2.3451918
.96	3.84	.10452	3.0176184	.32683	.032717	2.3495524
.97	3.88	.10512	3.0200955	.32865	.033352	2.3539021
.98	3.92	.10577	3.0227333	.33062	.033998	2.3582468
.99	3.96	.10647	3.0255236	.33274	.034656	2.3625923
1.00	4.00	.10722	3.0284594	.33500	.035326	2.3669445
1.01	4.04	.10802	3.0315344	.33741	.036008	2.3713093
1.02	4.08	.10887	3.0347434	.33997	.036703	2.3756926
1.03	4.12	.10977	3.0380817	.34267	.037411	2.3801004
1.04	4.16	.11072	3.0415452	.34552	.038132	2.3845385
1.05	4.20	.11172	3.0451305	.34852	.038867	2.3890130
1.06	4.24	.11277	3.0488347	.35167	.039616	2.3935299
1.07	4.28	.11387	3.0526551	.35497	.040379	2.3980953
1.08	4.32	.11502	3.0565894	.35842	.041157	2.4027154
1.09	4.36	.11623	3.0606356	.36203	.041950	2.4073963
1.10	4.40	.11749	3.0647919	.36579	.042759	2.4121443
1.11	4.44	.11880	3.0690570	.36971	.043584	2.4169657
1.12	4.48	.12016	3.0734299	.37378	.044425	2.4218669
1.13	4.52	.12157	3.0779101	.37801	.045283	2.4268545
1.14	4.56	.12303	3.0824975	.38240	.046158	2.4319351
1.15	4.60	.12454	3.0871925	.38695	.047050	2.4371155
1.16	4.64	.12610	3.0919960	.39166	.047960	2.4424027
1.17	4.68	.12771	3.0969092	.39653	.048888	2.4478039
1.18	4.72	.12937	3.1019338	.40156	.049834	2.4533264
1.19	4.76	.13108	3.1070722	.40676	.050799	2.4589779
1.20	4.80	.13284	3.1123268	.41213	.051784	2.4647663
1.21	4.84	.13465	3.1177008	.41767	.052789	2.4706999
1.22	4.88	.13651	3.1231975	.42339	.053815	2.4767875
1.23	4.92	.13842	3.1288208	.42929	.054863	2.4830385
1.24	4.96	.14038	3.1345747	.43538	.055933	2.4894625
1.25	5.00	.14239	3.1404638	.44166	.057026	2.4960697
1.26	5.04	.14445	3.1464928	.44813	.058143	2.5028710
1.27	5.08	.14656	3.1526669	.45480	.059285	2.5098777
1.28	5.12	.14872	3.1589917	.46167	.060453	2.5171021
1.29	5.16	.15093	3.1654732	.46875	.061648	2.5245571
1.30	5.20	.15319	3.1721179	.47604	.062871	2.5322562
1.31	5.24	.15550	3.1789328	.48355	.064123	2.5402138
1.32	5.28	.15786	3.1859253	.49128	.065405	2.5484452
1.33	5.32	.16027	3.1931033	.49923	.066718	2.5569665
1.34	5.36	.16273	3.2004753	.50741	.068063	2.5657950
1.35	5.40	.16524	3.2080503	.51582	.069441	2.5749488
1.36	5.44	.16780	3.2158378	.52447	.070853	2.5844469
1.37	5.48	.17041	3.2238480	.53336	.072300	2.5943096
1.38	5.52	.17307	3.2320918	.54250	.073783	2.6045581
1.39	5.56	.17578	3.2405807	.55189	.075303	2.6152152
1.40	5.60	.17854	3.2493270	.56154	.076861	2.6263050
1.41	5.64	.18135	3.2583437	.57145	.078458	2.6378532
1.42	5.68	.18421	3.2676446	.58163	.080095	2.6498870
1.43	5.72	.18712	3.2772442	.59208	.081773	2.6624350
1.44	5.76	.19008	3.2871577	.60281	.083493	2.6755276
1.45	5.80	.19309	3.2974012	.61383	.085256	2.6891969
1.46	5.84	.19615	3.3079917	.62514	.087063	2.7034770
1.47	5.88	.19926	3.3189473	.63675	.088915	2.7184040
1.48	5.92	.20242	3.3302870	.64866	.090813	2.7340161
1.49	5.96	.20563	3.3420309	.66088	.092759	2.7503540
1.50	6.00	.20889	3.3542000	.67341	.094753	2.7674610

TABLE V.—PIPE FIVE INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·005	·00027	$\bar{4}$·4416365	·01662	·0000072	$\bar{6}$·8628268
·002	·010	·00055	$\bar{4}$·7436467	·02354	·0000206	$\bar{5}$·3151245
·003	·015	·00066	$\bar{4}$·8204242	·02571	·0000380	$\bar{5}$·5800216
·004	·020	·00110	$\bar{3}$·0450707	·03330	·0000585	$\bar{5}$·7672074
·005	·025	·00138	$\bar{3}$·1121176	·03724	·0000817	$\bar{5}$·9125984
·006	·030	·00166	$\bar{3}$·2209387	·04078	·0001074	$\bar{1}$·0312681
·007	·035	·00191	$\bar{3}$·2826168	·01378	·0001352	$\bar{1}$·1311150
·008	·040	·00221	$\bar{3}$·3452715	·04705	·0001652	$\bar{1}$·2182144
·009	·045	·00248	$\bar{3}$·3959813	·01988	·0001970	$\bar{1}$·2945734
·010	·050	·00276	$\bar{3}$·4415578	·05257	·0002307	$\bar{1}$·3631025
·011	·055	·00303	$\bar{3}$·4828056	·05513	·0002661	$\bar{1}$·4251197
·02	·10	·00550	$\bar{3}$·7407018	·07419	·0006508	$\bar{1}$·8134929
·03	·15	·00821	$\bar{3}$·9147064	·09064	·0011920	$\bar{3}$·0762813
·04	·20	·01087	$\bar{2}$·0365501	·10429	·0018295	$\bar{3}$·2623357
·05	·25	·01354	$\bar{2}$·1319174	·11640	·0025487	$\bar{3}$·4063331
·06	·30	·01619	$\bar{2}$·2094243	·12726	·0033101	$\bar{3}$·5237600
·07	·35	·01880	$\bar{2}$·2742479	·13712	·0041958	$\bar{3}$·6228182
·08	·40	·02133	$\bar{2}$·3301111	·14623	·0051102	$\bar{3}$·7084115
·09	·45	·02393	$\bar{2}$·3791135	·15472	·0060784	$\bar{3}$·7837944
·10	·50	·02646	$\bar{2}$·4226974	·16268	·0070963	$\bar{3}$·8510353
·11	·55	·02896	$\bar{2}$·4619102	·17059	·0081607	$\bar{3}$·9117308
·12	·60	·03144	$\bar{2}$·4974922	·17731	·0092682	$\bar{3}$·9669967
·13	·65	·03388	$\bar{2}$·5300381	·18408	·010416	$\bar{2}$·0177215
·14	·70	·03630	$\bar{2}$·5599880	·19054	·011602	$\bar{2}$·0645685
·15	·75	·03869	$\bar{2}$·5877018	·19672	·012825	$\bar{2}$·1080750
·16	·80	·04106	$\bar{2}$·6134565	·20264	·014081	$\bar{2}$·1486626
·17	·85	·04340	$\bar{2}$·6375014	·20832	·015367	$\bar{2}$·1866974
·18	·90	·04571	$\bar{2}$·6600182	·21380	·016690	$\bar{2}$·2224590
·19	·95	·04799	$\bar{2}$·6811723	·21907	·018038	$\bar{2}$·2561930
·20	1·00	·05024	$\bar{2}$·7011062	·22415	·019413	$\bar{2}$·2881125
·21	1·05	·05247	$\bar{2}$·7199333	·22906	·020815	$\bar{2}$·3183896

TABLE V —*continued*

Depth on In vert — by Diameter	Depth on In vert in Ins	Hydraulic Mean Depth R in Feet	log (R)	$\sqrt{R}$ in Feet	Area of Cross Section in Square Feet	log (A)
51	2 550	10547	I 0231627	32477	069913	2 8445080
52	2 60	10675	I 0283732	32672	·071648	2 8552056
53	2 65	10798	I 0333612	32860	·073382	2 8657902
54	2 70	10921	I 0382891	33047	075113	2 8762702
55	2 750	11036	I 0428476	33221	076842	2 8856036
56	2 80	11150	I 0472943	33392	078568	2 8952489
57	2 850	11260	I 0515568	33556	080289	2 9046609
58	2 90	11366	I 0556389	33714	082006	2 9138469
59	2 950	11469	I 0596397	33866	083717	2 9228146
60	3 00	11569	I 0633006	34013	085421	2 9315673
61	3 05	11663	I 0668379	34152	087120	2 9401126
62	3 10	11755	I 0702203	34285	088808	2 9484546
63	3 150	11842	I 0734524	34413	090489	2 9566977
64	3 20	11926	I 0765091	34534	092160	2 9645468
65	3 25	12006	I 0794040	34649	093822	2 9723073
66	3 30	12081	I 0821330	34758	095473	2 9798810
67	3 35	12153	I 0846994	34861	097111	2 9872720
68	3 40	12220	I 0870942	34958	098738	2 9944851
69	3 45	12284	I 0893436	35048	10036	I 001 1219
70	3 50	12343	I 0914246	35132	10194	I 0083857
71	3 55	12397	I 0933399	35210	10343	I 0150787
72	3 60	12447	I 0950913	35281	10510	I 0216042
73	3 65	12493	I 0966761	35345	10665	I 0279637
74	3 70	12534	I 0980962	35403	10818	I 0341597
75	3 75	12570	I 0993456	35454	10969	I 0401929
76	3 80	12601	I 1004223	35498	11118	I 0460647
77	3 85	12627	I 1013246	35535	11266	I 0517774
78	3 90	12648	I 1020471	35565	11411	I 0573305
79	3 95	12664	I 1025870	35587	11553	I 0627256
80	4 00	12674	I 1029354	35601	11693	I 0679602
81	4 05	12682	I 1031347	35607	11831	I 0730421
82	4 10	12677	I 1030493	35606	11966	I 0779625
83	4 15	12670	I 1027938	35595	12098	I 0827242
84	4 20	12656	I 1023197	35576	12227	I 0873266
85	4 250	12636	I 1016137	35547	12352	I 0917664
86	4 30	12608	I 1006646	35508	12475	I 0960436
87	4 350	12573	I 0994553	35459	12593	I 1001545
88	4 40	12530	I 0979675	35398	12708	I 1040963
89	4 45	12507	I 0961779	35325	12819	I 1078645
90	4 50	12418	I 0940580	35239	12925	I 1114557
91	4 55	12347	I 0915744	35138	13027	I 1148623
92	4 60	12265	I 0886808	35021	13124	I 1180780
93	4 65	12171	I 0853293	34887	13215	I 1210944
94	4 70	12061	I 0814098	34730	13301	I 1238964
95	4 75	11937	I 0769114	34550	13380	I 1264724
96	4 80	11787	I 0714395	34333	13452	I 1288007
97	4 85	11612	I 0649281	34077	13516	I 1308540
98	4 90	11391	I 0567689	33758	13570	I 1325893
985	4 945	11141	I 0469485	33379	13608	I 1338188
990	4 950	11107	I 0456057	33325	13612	I 1339318
991	4 955	11076	I 0443974	33281	13615	I 1340393
992	4 960	11033	I 0426982	33216	13618	I 1341406
993	4 965	10999	I 0413591	33164	13621	I 1342363
994	4 970	10948	I 0393711	33089	13624	I 1343249
995	4 975	10901	I 0374814	33017	13627	I 1344068
996	4 980	10849	I 0354023	32938	13629	I 1344807
997	4 985	·10790	I 0330252	32848	13631	I 1345462
998	4 990	10720	I 0302112	32742	13633	I 1346015
999	4 995	10427	I 0181618	32290	13634	I 1346440
1 000	5 000	10416	I 0177288	32274	·13635	I 1346673

TABLE VI.—PIPE SIX INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·006	·00033	1·5208177	·01821	·000010	5·0211893
·002	·012	·00066	4·8228279	·02578	·000029	5·4734870
·003	·018	·00079	4·8995054	·02816	·000054	5·7383811
·004	·024	·00133	3·1242519	·03648	·000084	5·9255699
·005	·030	·00166	3·2212988	·04079	000118	4·0709609
·006	·036	·00199	3·3001199	·04467	·000154	4·1896306
·007	·042	·00230	3·3617980	·04796	·000194	4·2894775
·008	·048	·00265	3·4244527	·05154	·000238	4·3765769
·009	·054	·00298	3·4751625	·05464	·000284	4·4529359
·010	·060	·00331	3·5207390	·05769	·000332	4·5214650
·011	·066	·00365	3·5629868	·06046	·000383	4·5834822
·02	·12	·00675	3·8298830	·08240	·000937	4·9718554
·03	·18	·00986	3·9938876	·09816	·001716	3·2346438
·04	·24	·01305	2·1157313	·11425	·002634	3·4206982
·05	·30	·01625	2·2110986	·12751	·003670	3·5646956
·06	·36	·01943	2·2886055	·13941	·004809	3·6821225
·07	·42	·02205	2·3434291	·14849	·006042	3·7811807
·08	·48	·02566	2·4092923	·16019	·007359	3·8668010
·09	·54	·02872	2·4582947	·16949	·008753	3·9421569
·10	·60	·03175	2·5018786	·17821	·010219	2·0093978
·11	·66	·03476	2·5410914	·18644	·011751	2·0700933
·12	·72	·03772	2·5766734	·19423	·013346	2·1253592
·13	·78	·04066	2·6092193	·20165	·014999	2·1760840
·14	·84	·04356	2·6391692	·20872	·016708	2·2229310
·15	·90	·04643	2·6668830	·21549	·018469	2·2664375
·16	·96	·01927	2·6926377	·22198	·020278	2·3070251
·17	1·02	·05086	2·7066826	·22560	·022134	2·3450599
·18	1·08	·05485	2·7391994	·23120	·024034	2·3808215
·19	1·14	·05759	2·7603535	·23998	·025975	2·4145555
·20	1·20	·06029	2·7802874	·24555	·027956	2·1464750
·21	1·26	·06296	2·7991145	·25093	·029974	2·4767500
·22	1·32	·06560	2·8169345	·25613	·032028	2·5055366
·23	1·38	·06820	2·8338356	·26116	·031116	2·5329613
·24	1·44	·07077	2·8498969	·26604	·036236	2·5591433
·25	1·50	·07348	2·8661798	·27107	·038386	2·5841785
·26	1·56	·07581	2·8797486	·27534	·040566	2·6081595
·27	1·62	·07828	2·8936536	·27978	·042772	2·6311646
·28	1·68	·08071	2·9069391	·28409	·045005	2·6532608
·29	1·74	·08310	2·9196479	·28828	·047262	2·6745121
·30	1·80	·08547	2·9318159	·29235	·049542	2·6949735
·31	1·86	·08779	2·9434825	·29630	·051844	2·7146985
·32	1·92	·09008	2·9546658	·30014	·054166	2·7337308
·33	1·98	·09234	2·9654050	·30388	·056508	2·7521138
·34	2·04	·09456	2·9757176	·30750	·058868	2·7698811
·35	2·10	·09674	2·9856315	·31103	·061245	2·7870706
·36	2·16	·09889	2·9951671	·31447	·063638	2·8037148
·37	2·22	·10100	1·0043359	·31781	·066044	2·8198383
·38	2·28	·10307	1·0131615	·32101	·068465	2·8354702
·39	2·34	·10511	1·0216595	·32421	·070898	2·8506355
·40	2·40	·10711	1·0298530	·32728	·073342	2·8796505
·41	2·46	·10907	1·0377253	·33026	·075797	2·8796505
·42	2·52	·11099	1·0453213	·33316	·078260	2·8935426
·43	2·58	·11288	1·0526383	·33598	·080732	2·9070457
·44	2·64	·11473	1·0596902	·33872	·083211	2·9201794
·45	2·70	·11654	1·0664865	·34138	·085695	2·9329193
·46	2·76	·11829	1·0729524	·34393	·088185	2·9453972
·47	2·82	·12005	1·0793762	·34648	·090679	2·9575079
·48	2·88	·12173	1·0854199	·34890	·093176	2·9693040
·49	2·94	·12338	1·0912740	·35126	·095675	2·9807985
·50	3·00	·12500	1·0969100	·35355	·098174	2·9819999

TABLE VI —*continued*

Depth on Inv ert = $\frac{1}{10}$ Diameter	Depth on Invert in Ins	Hydraulic Mean Depth R in Feet	log (R)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log (A)
·51	3·06	·12657	I·1023439	35577	100674	I·0029209
·52	3·12	·12810	I·1075544	35791	103173	I·0135681
·53	3·18	·12958	I·1125424	35997	105670	I·0239527
·54	3·24	·13106	I·1174703	36202	108164	I·0340827
·55	3·30	·13244	I·1220288	36392	110654	I·0439661
·56	3·36	·13380	I·1264755	36579	113139	I·0536114
·57	3·42	·13512	I·1307380	36759	115617	I·0630236
·58	3·48	·13640	I·1348201	36932	118089	I·0722094
·59	3·54	·13763	I·1387209	37098	120553	I·0811771
·60	3·60	·13882	I·1424828	37259	123007	I·0899298
·61	3·66	·13996	I·1460191	37411	125451	I·0984751
·62	3·72	·14106	I·1494105	37558	127884	I·1068171
·63	3·78	·14211	I·1526336	37697	130304	I·1149602
·64	3·84	·14311	I·1556303	37830	132711	I·1229093
·65	3·90	·14407	I·1585852	37957	135104	I·1306698
·66	3·96	·14498	I·1613147	38076	137481	I·1382435
·67	4·02	·14584	I·1638806	38189	139841	I·1456345
·68	4·08	·14664	I·1662754	38294	142183	I·1528476
·69	4·14	·14740	I·1685248	38393	144505	I·1598844
·70	4·20	·14811	I·1706058	38486	146807	I·1667482
·71	4·26	·14877	I·1725211	38571	149087	I·1734412
·72	4·32	·14937	I·1742725	38648	151344	I·1799667
·73	4·38	·14991	I·1758583	38719	153577	I·1863262
·74	4·44	·15041	I·1772774	38782	155783	I·1925222
·75	4·50	·15084	I·1785268	38838	157963	I·1985554
·76	4·56	·15121	I·1796089	38886	160113	I·2044272
·77	4·62	·15153	I·1805098	38927	162233	I·2101399
·78	4·68	·15178	I·1812283	38959	164321	I·2156930
·79	4·74	·15197	I·1817682	38983	166375	I·2210881
·80	4·80	·15209	I·1821166	38999	168393	I·2263227
·81	4·86	·15215	I·1822759	39006	170374	I·2314046
·82	4·92	·15213	I·1822305	39004	172315	I·2363250
·83	4·98	·15204	I·1819750	38993	174215	I·2410867
·84	5·04	·15188	I·1815003	38971	176071	I·2456891
·85	5·10	·15163	I·1807049	38940	177880	I·2501289
·86	5·16	·15130	I·1798458	38897	179641	I·2544061
·87	5·22	·15088	I·1786365	38843	181349	I·2585170
·88	5·28	·15036	I·1771487	38777	183003	I·2624588
·89	5·34	·14974	I·1753591	38697	184598	I·2662270
·90	5·40	·14901	I·1732397	38602	186130	I·2698182
·91	5·46	·14816	I·1707556	38492	187596	I·2732248
·92	5·52	·14718	I·1678620	38364	188990	I·2764405
·93	5·58	·14604	I·1645005	38216	190307	I·2794559
·94	5·64	·14474	I·1606910	38044	191539	I·2822589
·95	5·70	·14324	I·1560326	37848	192679	I·2848349
·96	5·76	·14145	I·1506207	37610	193715	I·2871632
·97	5·82	·13935	I·1441093	37329	194633	I·2892165
·98	5·88	·13675	I·1359501	36980	195412	I·2909518
·989	5·934	·13369	I·1261237	36564	195966	I·2921813
·990	5·940	·13327	I·1247469	36506	196017	I·2922943
·991	5·946	·13285	I·1233786	36449	196065	I·2924018
·992	5·952	·13239	I·1218794	36386	196111	I·2925031
·993	5·958	·13199	I·1205403	36330	196154	I·2925988
·994	5·964	·13138	I·1185523	36247	196194	I·2926874
·995	5·970	·13081	I·1166626	36168	·196231	I·2927693
·996	5·976	·13019	I·1145835	36082	196265	I·2928432
·997	5·982	·12948	I·1122104	35983	196294	I·2929087
·998	5·988	·12864	I·1093324	35867	196319	I·2929640
·999	5·994	·12512	I·0973430	35372	196339	I·2930065
1·000	6·000	·12500	I·0969100	35355	196349	I·2930299

TABLE VII.—PIPE SEVEN INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth, R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·007	·00038	$\bar{4}$·5877645	·00196	·000014	$\bar{5}$·1550829
·002	·014	·00077	$\bar{4}$·8897747	·02785	·000040	$\bar{5}$·6073806
·003	·021	·00092	$\bar{4}$·9665522	·03042	·000074	$\bar{5}$·8722777
·004	·028	·00155	$\bar{3}$·1911987	·03940	·000114	$\bar{4}$·0594635
·005	·035	·00194	$\bar{3}$·2882456	·04406	·000160	$\bar{4}$·2048545
·006	·042	·00232	$\bar{3}$·3670667	·04825	·000211	$\bar{4}$·3235242
·007	·049	·00268	$\bar{3}$·4287448	·05180	·000265	$\bar{4}$·4233711
·008	·056	·00310	$\bar{3}$·4913995	·05568	·000323	$\bar{4}$·5104705
·009	·063	·00348	$\bar{3}$·5421093	·05902	·000386	$\bar{4}$·5868295
·010	·070	·00386	$\bar{3}$·5876858	·06220	·000452	$\bar{4}$·6553586
·011	·077	·00425	$\bar{3}$·6289336	·06523	·000521	$\bar{4}$·7173758
·02	·14	·00770	$\bar{3}$·8868298	·08778	·001275	$\bar{3}$·1057490
·03	·21	·01150	$\bar{2}$·0608344	·10725	·002336	$\bar{3}$·3685374
·04	·28	·01522	$\bar{2}$·1826781	·12340	·003585	$\bar{3}$·5545918
·05	·35	·01896	$\bar{2}$·2780454	·13772	·004995	$\bar{3}$·6985892
·06	·42	·02267	$\bar{2}$·3555523	·15058	·006546	$\bar{3}$·8160161
·07	·49	·02632	$\bar{2}$·4203759	·16225	·008223	$\bar{3}$·9150743
·08	·56	·02993	$\bar{2}$·4762391	·17302	·010016	$\bar{2}$·0006976
·09	·63	·03351	$\bar{2}$·5252415	·18307	·011913	$\bar{2}$·0760505
·10	·70	·03705	$\bar{2}$·5688254	·19249	·013908	$\bar{2}$·1432914
·11	·77	·04055	$\bar{2}$·6080382	·20138	·015995	$\bar{2}$·2039869
·12	·84	·04401	$\bar{2}$·6436202	·20980	·018165	$\bar{2}$·2592528
·13	·91	·04745	$\bar{2}$·6762661	·21783	·020416	$\bar{2}$·3099776
·14	·98	·05082	$\bar{2}$·7061160	·22545	·022741	$\bar{2}$·3568246
·15	1·05	·05417	$\bar{2}$·7338298	·23276	·025136	$\bar{2}$·4003311
·16	1·12	·05748	$\bar{2}$·7595845	·23976	·027600	$\bar{2}$·4409187
·17	1·19	·06076	$\bar{2}$·7836294	·24649	·030126	$\bar{2}$·4789535
·18	1·26	·06399	$\bar{2}$·8061462	·25295	·032712	$\bar{2}$·5147151
·19	1·33	·06788	$\bar{2}$·8273003	·25921	·035354	$\bar{2}$·5484491
·20	1·40	·07034	$\bar{2}$·8472342	·26522	·038051	$\bar{2}$·5083686
·21	1·47	·07346	$\bar{2}$·8660613	·27104	·040798	$\bar{2}$·6106457
·22	1·54	·07653	$\bar{2}$·8838813	·27666	·043594	$\bar{2}$·6394302
·23	1·61	·07957	$\bar{2}$·9007824	·28209	·046436	$\bar{2}$·6668549
·24	1·68	·08257	$\bar{2}$·9168437	·28735	·049321	$\bar{2}$·6930369
·25	1·75	·08553	$\bar{2}$·9321266	·29245	·052248	$\bar{2}$·7180721
·26	1·82	·08844	$\bar{2}$·9466954	·29740	·055214	$\bar{2}$·7420531
·27	1·89	·09132	$\bar{2}$·9606004	·30220	·058081	$\bar{2}$·7640582
·28	1·96	·09416	$\bar{2}$·9738859	·30686	·061256	$\bar{2}$·7871544
·29	2·03	·09696	$\bar{2}$·9865947	·31138	·064328	$\bar{2}$·8084057
·30	2·10	·09971	$\bar{2}$·9987627	·31578	·067432	$\bar{2}$·8288671
·31	2·17	·10243	$\bar{1}$·0104293	·32005	·070565	$\bar{2}$·8485921
·32	2·24	·10509	$\bar{1}$·0216126	·32419	·073726	$\bar{2}$·8676244
·33	2·31	·10773	$\bar{1}$·0323518	·32823	·076914	$\bar{2}$·8860071
·34	2·38	·11032	$\bar{1}$·0426644	·33215	·080126	$\bar{2}$·9037747
·35	2·45	·11286	$\bar{1}$·0525783	·33596	·083361	$\bar{2}$·9209642
·36	2·52	·11537	$\bar{1}$·0621139	·33967	·086618	$\bar{2}$·9376084
·37	2·59	·11783	$\bar{1}$·0712827	·34328	·089894	$\bar{2}$·9537319
·38	2·66	·12025	$\bar{1}$·0801083	·34678	·093188	$\bar{2}$·9693638
·39	2·73	·12263	$\bar{1}$·0886063	·35019	·096500	$\bar{2}$·9845291
·40	2·80	·12496	$\bar{1}$·0967998	·35350	·099827	$\bar{2}$·9992193
·41	2·87	·12725	$\bar{1}$·1046721	·35673	·10316	$\bar{1}$·0135141
·42	2·94	·12949	$\bar{1}$·1122681	·35986	·10652	$\bar{1}$·0274362
·43	3·01	·13169	$\bar{1}$·1195851	·36290	·10988	$\bar{1}$·0409393
·44	3·08	·13385	$\bar{1}$·1266371	·36586	·11325	$\bar{1}$·0540730
·45	3·15	·13596	$\bar{1}$·1334333	·36873	·11661	$\bar{1}$·0668529
·46	3·22	·13800	$\bar{1}$·1398992	·37149	·12003	$\bar{1}$·0792908
·47	3·29	·14006	$\bar{1}$·1463230	·37425	·12342	$\bar{1}$·0914015
·48	3·36	·14202	$\bar{1}$·1523667	·37686	·12682	$\bar{1}$·1031976
·49	3·43	·14395	$\bar{1}$·1582208	·37941	·13022	$\bar{1}$·1146921
·50	3·50	·14583	$\bar{1}$·1638568	·38188	·13362	$\bar{1}$·1258931

TABLE VII—*continued*

Depth in Inverted Diameter	Depth in Inverted Inches	Hydraulic Mean Depth R in Feet.	log. (R.)	$\sqrt{R}$ in Feet	Area of Cross Section in Square Feet.	$\log_e$ (A.)
·51	3·57	1·4766	I·1692907	1·3842	1·3702	I·1368141
·52	3·64	1·4945	I·1745012	1·3865	1·4043	I·1474617
·53	3·71	·1·5117	I·1794892	1·3888	·1·4382	I·1578163
·54	3·78	1·5290	I·1844171	1·3910	1·4722	I·1679763
·55	3·85	·1·5451	I·1889756	1·3930	1·5061	I·1778507
·56	3·92	·1·5610	I·1934223	1·3950	1·5399	I·1875050
·57	3·99	1·5764	I·1976848	1·3970	1·5736	I·1969170
·58	4·06	1·5913	I·2017603	1·3989	1·6073	I·2061030
·59	4·13	1·6057	I·2056747	1·4007	1·6408	I·2150707
60	4·20	1·6196	I·2094236	1·4025	1·6742	I·2238234
61	4·27	1·6329	I·2129659	1·4040	1·7075	I·2323687
62	4·34	1·6459	I·2163573	1·4056	1·7406	I·2407107
63	4·41	1·6579	I·2195804	1·4071	1·7735	I·2488548
64	4·48	1·6696	I·2226471	1·4086	1·8063	I·2568029
65	4·55	1·6808	I·2255320	1·4099	1·8389	I·2645634
66	4·62	1·6914	I·2282615	1·4112	1·8712	I·2721371
67	4·69	1·7014	I·2308274	1·4124	1·9033	I·2795281
68	4·76	1·7108	I·2332222	1·4136	1·9352	I·2867412
69	4·83	1·7197	I·2354716	1·4147	1·9668	I·2937780
·70	4·90	1·7280	I·2375526	1·4156	1·9982	I·3006418
·71	4·97	1·7356	I·2394673	1·4164	2·0292	I·3073348
·72	5·04	1·7426	I·2412193	1·4171	2·0599	I·3138603
73	5·11	1·7490	I·2428051	1·4178	2·0903	I·3202198
74	5·18	1·7548	I·2442242	1·4183	2·1203	I·3264158
75	5·25	1·7598	I·2454736	1·4189	2·1500	I·3324490
76	5·32	1·7642	I·2465503	1·4192	2·1793	I·3383208
77	5·39	1·7678	I·2474526	1·4196	2·2081	I·3440335
78	5·46	1·7708	I·2481751	1·4198	2·2365	I·3495866
79	5·53	1·7730	I·2487150	1·4199	2·2644	I·3549817
80	5·60	1·7744	I·2490634	1·4201	2·2920	I·3602163
81	5·67	1·7751	I·2492227	1·4202	2·3189	I·3652982
82	5·74	1·7749	I·2491773	1·4201	2·3454	I·3702186
83	5·81	1·7738	I·2489218	1·4197	2·3712	I·3749803
84	5·88	1·7719	I·2484477	1·4194	2·3965	I·3795827
85	5·95	1·7690	I·2477417	1·4190	2·4211	I·3840225
86	6·02	1·7651	I·2467326	1·4184	2·4451	I·3882097
87	6·09	·1·7602	I·2455833	1·4176	2·4683	I·3922410
88	6·16	1·7542	I·2440155	1·4164	2·4908	I·3960324
89	6·23	1·7470	I·2423059	1·4151	2·5125	I·4001206
90	6·30	1·7385	I·2401865	1·4136	2·5334	I·4037118
91	6·37	1·7286	I·2377024	1·4117	2·5533	I·4071184
92	6·44	1·7171	I·2348088	1·4095	2·5721	I·4103341
93	6·51	1·7039	I·2314473	1·4069	2·5902	I·4133495
94	6·58	1·6886	I·2275378	1·4040	2·6070	I·4161525
95	6·65	1·6712	I·2230834	1·4006	2·6224	I·4187285
96	6·72	1·6503	I·2177675	1·3965	2·6360	I·4210068
97	6·79	1·6257	I·2116761	1·3918	2·6481	I·4231101
98	6·86	1·5955	I·2043963	1·3861	2·6567	I·4248454
989	6·923	1·5708	I·1980765	1·3813	2·6673	I·4260749
990	6·930	1·5548	I·1940837	1·3781	2·6680	I·4261879
991	6·937	1·5413	I·1903254	1·3752	2·6686	I·4262934
992	6·944	·1·5446	I·1888202	1·3739	2·6692	I·4263907
993	6·951	·1·5325	I·1874871	1·3729	2·6698	I·4264824
994	6·958	1·5328	I·1854491	1·3714	2·6704	I·4265810
995	6·965	1·5261	I·1830894	1·3696	2·6709	I·4266629
996	6·972	1·5189	I·1817303	1·3673	2·6713	I·4267368
997	6·979	1·5106	I·1791572	1·3660	2·6717	I·4268063
998	6·986	1·5005	I·1763389	1·3640	2·6721	I·4268726
999	6·993	1·4697	I·1642208	1·3547	2·6723	I·4268881
1·000	7·000	1·4583	I·1600268	1·3515	2·6725	I·4269234

TABLE VIII.—PIPE EIGHT INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Feet.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·008	·00044	$\bar{1}$·6457565	·02103	·000016	$\bar{5}$·2710668
·002	·016	·00088	$\bar{1}$·9477667	·02977	·000042	$\bar{5}$·7233645
·003	·024	·00105	$\bar{3}$·0245442	·03252	·000096	$\bar{5}$·9882586
·004	·032	·00177	$\bar{3}$·2491907	·04213	·000148	$\bar{4}$·1754474
·005	·040	·00221	$\bar{3}$·3462376	·04711	·000208	$\bar{4}$·3208384
·006	·048	·00266	$\bar{3}$·4250587	·05158	·000272	$\bar{4}$·4395081
·007	·056	·00306	$\bar{3}$·4867368	·05538	·000344	$\bar{4}$·5393550
·008	·064	·00354	$\bar{3}$·5493915	·05952	·000424	$\bar{4}$·6264544
·009	·072	·00398	$\bar{3}$·6001013	·06310	·000504	$\bar{4}$·7028134
·010	·080	·00422	$\bar{3}$·6456778	·06550	·000588	$\bar{4}$·7713425
·011	·088	·00486	$\bar{3}$·6869256	·06973	·000680	$\bar{4}$·8333597
·02	·16	·00880	$\bar{3}$·9448218	·09384	·001664	$\bar{3}$·2217329
·03	·24	·01314	$\bar{2}$·1188264	·11466	·003052	$\bar{3}$·4845213
·04	·32	·01740	$\bar{2}$·2406701	·13192	·004684	$\bar{3}$·6705757
·05	·40	·02167	$\bar{2}$·3360374	·14723	·006528	$\bar{3}$·8145731
·06	·48	·02591	$\bar{2}$·4135443	·16098	·008548	$\bar{3}$·9320000
·07	·56	·03008	$\bar{2}$·4783679	·17345	·010740	$\bar{2}$·0310582
·08	·64	·03421	$\bar{2}$·5342311	·18497	·013080	$\bar{2}$·1166815
·09	·72	·03830	$\bar{2}$·5832335	·19571	·015560	$\bar{2}$·1920344
·10	·80	·04234	$\bar{2}$·6268174	·20578	·018168	$\bar{2}$·2592753
·11	·88	·04634	$\bar{2}$·6660302	·21528	·020892	$\bar{2}$·3199708
·12	·96	·05030	$\bar{2}$·7016122	·22429	·023728	$\bar{2}$·3752367
·13	1·04	·05421	$\bar{2}$·7341581	·23285	·026664	$\bar{2}$·4259615
·14	1·12	·05809	$\bar{2}$·7641090	·24102	·029704	$\bar{2}$·4728085
·15	1·20	·06191	$\bar{2}$·7918218	·24883	·032832	$\bar{2}$·5163150
·16	1·28	·06723	$\bar{2}$·8275765	·25929	·036048	$\bar{2}$·5569026
·17	1·36	·06944	$\bar{2}$·8416214	·26352	·039348	$\bar{2}$·5949374
·18	1·44	·07313	$\bar{2}$·8641382	·27040	·042728	$\bar{2}$·6306990
·19	1·52	·07678	$\bar{2}$·8852923	·27710	·046176	$\bar{2}$·6644330
·20	1·60	·08039	$\bar{2}$·9052262	·28354	·049700	$\bar{2}$·6963525
·21	1·68	·08395	$\bar{2}$·9240533	·28975	·053288	$\bar{2}$·7266296
·22	1·76	·08747	$\bar{2}$·9418733	·29576	·056940	$\bar{2}$·7554141
·23	1·84	·09094	$\bar{2}$·9587744	·30157	·060608	$\bar{2}$·7828388
·24	1·92	·09437	$\bar{2}$·9748357	·30719	·064420	$\bar{2}$·8090208
·25	2·00	·09775	$\bar{2}$·9901186	·31265	·068244	$\bar{2}$·8340560
·26	2·08	·10108	$\bar{1}$·0046874	·31794	·072116	$\bar{2}$·8580370
·27	2·16	·10437	$\bar{1}$·0185924	·32307	·076040	$\bar{2}$·8810421
·28	2·24	·10771	$\bar{1}$·0318779	·32804	·080008	$\bar{2}$·9031383
·29	2·32	·11081	$\bar{1}$·0445867	·33288	·084020	$\bar{2}$·9243896
·30	2·40	·11396	$\bar{1}$·0567547	·33758	·088072	$\bar{2}$·9448510
·31	2·48	·11706	$\bar{1}$·0684213	·34215	·092168	$\bar{2}$·9645760
·32	2·56	·12011	$\bar{1}$·0796046	·34658	·096296	$\bar{2}$·9836083
·33	2·64	·12312	$\bar{1}$·0903438	·35089	·100460	$\bar{1}$·0019913
·34	2·72	·12608	$\bar{1}$·1006564	·35508	·104656	$\bar{1}$·0197586
·35	2·80	·12899	$\bar{1}$·1105703	·35916	·108880	$\bar{1}$·0369481
·36	2·88	·13185	$\bar{1}$·1201059	·36312	·113132	$\bar{1}$·0535923
·37	2·96	·13467	$\bar{1}$·1292747	·36697	·117412	$\bar{1}$·0697158
·38	3·04	·13743	$\bar{1}$·1381003	·37072	·121716	$\bar{1}$·0853477
·39	3·12	·14015	$\bar{1}$·1465983	·37437	·126040	$\bar{1}$·1005130
·40	3·20	·14282	$\bar{1}$·1547918	·37791	·130384	$\bar{1}$·1295280
·41	3·28	·14543	$\bar{1}$·1626641	·38136	·134748	$\bar{1}$·1295280
·42	3·36	·14800	$\bar{1}$·1702601	·38471	·139128	$\bar{1}$·1434201
·43	3·44	·15051	$\bar{1}$·1775771	·38796	·143524	$\bar{1}$·1569232
·44	3·52	·15297	$\bar{1}$·1846291	·39112	·147928	$\bar{1}$·1700569
·45	3·60	·15539	$\bar{1}$·1914253	·39419	·152348	$\bar{1}$·1828368
·46	3·68	·15772	$\bar{1}$·1978912	·39714	·156776	$\bar{1}$·1952747
·47	3·76	·16007	$\bar{1}$·2043150	·40009	·161208	$\bar{1}$·2073854
·48	3·84	·16231	$\bar{1}$·2103587	·40288	·165644	$\bar{1}$·2191815
·49	3·92	·16451	$\bar{1}$·2162128	·40561	·170088	$\bar{1}$·2306760
·50	4·00	·16666	$\bar{1}$·2218488	·40825	·174532	$\bar{1}$·2418774

TABLE VIII—*continued*

Depth in Feet ÷ ¼ Diameter	Depth in Feet in Inches	Hydraulic Mean Depth R in Feet.	log. (R)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	$\log_e$ (A)
51	4 08	16876	I 2272827	41100	178976	I 2 27380
52	4 16	17080	I 2321032	41328	183120	I 2634455
53	4 24	17277	I 2374812	41567	187856	I 2768302
54	4 32	17474	I 2424091	41803	192232	I 2833602
55	4 40	17669	I 2469676	42023	196716	I 2938436
56	4 48	17840	I 2514143	42238	201136	I 3034889
57	4 56	18016	I 2556768	42446	205540	I 3129011
58	4 64	18186	I 2597 83	42646	209936	I 3220869
59	4 72	18351	I 2636657	42838	214316	I 3310446
60	4 80	18510	I 2674216	43024	218676	I 3398073
61	4 88	18662	I 2709679	43199	223024	I 3483526
62	4 96	18808	I 2743413	43368	227348	I 3566946
63	5 04	18948	I 2775724	43530	231652	I 3648377
64	5 12	19082	I 2806241	43683	235932	I 3727868
65	5 20	19210	I 2835240	43829	240192	I 3805473
66	5 28	19335	I 2863035	43972	244856	I 3881210
67	5 36	19445	I 2888194	44097	248636	I 3955120
68	5 44	19553	I 2912142	44219	252768	I 4027251
69	5 52	19654	I 2934636	44334	256888	I 4097619
70	5 60	19749	I 2955446	44440	260992	I 4166257
71	5 68	19836	I 2974690	44537	265044	I 4233187
72	5 76	19916	I 2992113	44628	269056	I 4298442
73	5 84	19989	I 3007971	44709	273024	I 4362037
74	5 92	20054	I 3022162	44782	276948	I 4424997
75	6 00	20112	I 3034656	44847	280824	I 4484329
76	6 08	20162	I 3045423	44903	284644	I 4543047
77	6 16	20204	I 3054446	44949	288412	I 4600174
78	6 24	20238	I 3061671	44987	292124	I 4655705
79	6 32	20263	I 3067070	45015	295776	I 4709656
80	6 40	20276	I 3070554	45032	299364	I 4762002
81	6 48	20287	I 3072147	45041	302888	I 4812821
82	6 56	20284	I 3071653	45038	306336	I 4862025
83	6 64	20272	I 3069138	45025	309716	I 4909612
84	6 72	20250	I 3064397	45001	313016	I 4956000
85	6 80	20218	I 3057337	44964	316232	I 5000864
86	6 88	20173	I 3047846	44915	319360	I 5042836
87	6 96	20117	I 3035763	44852	322396	I 5083945
88	7 04	20048	I 3020775	44775	325332	I 5123363
89	7 12	19966	I 3002979	44683	328172	I 5161015
90	7 20	19869	I 2981785	44574	330896	I 5196957
91	7 28	19755	I 2956944	44447	333512	I 5231023
92	7 36	19624	I 2928008	44300	336020	I 5263180
93	7 44	19473	I 2894734	44128	338324	I 5293534
94	7 52	19308	I 2857238	43940	340512	I 5321764
95	7 60	19100	I 2810114	43703	342540	I 5347124
96	7 68	18880	I 2758595	43423	344380	I 5370407
97	7 76	18580	I 2690481	43104	346012	I 5390440
98	7 84	18234	I 2608883	42702	347336	I 5408203
99	7 92	17826	I 2510685	42221	348284	I 5421688
100	8 00	17370	I 2403857	42154	348472	I 5421715
101	8 08	17714	I 2483174	42088	348599	I 5422713
102	8 16	17653	I 2468182	42015	348644	I 5423886
103	8 24	17595	I 2453701	41950	348716	I 5424763
104	8 32	17518	I 2434411	41864	348788	I 5425949
105	8 40	17442	I 2416034	41775	348896	I 5427247
106	8 48	17353	I 2393224	41664	348916	I 5427267
107	8 56	17264	I 2371432	41560	348956	I 5427852
108	8 64	17162	I 2346312	41417	348912	I 5428415
109	8 72	17072	I 2323818	41315	348948	I 5428841
1000	87360	16666	I 2218488	40825	348964	I 5428974

TABLE IX.—PIPE NINE INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·009	·00049	$\bar{4}$·6969090	·02230	·000018	$\bar{5}$·3733718
·002	·018	·00099	$\bar{4}$·9989192	·03158	·000063	$\bar{5}$·8256695
·003	·027	·00119	$\bar{3}$·0756967	·03450	.000117	$\bar{4}$·0905636
·004	·036	·00199	$\bar{3}$·3003432	·04468	·000189	$\bar{4}$·2777524
·005	·045	·00249	$\bar{3}$·3973901	·04996	·000261	$\bar{4}$·4231434
·006	·054	·00299	$\bar{3}$·4762112	·05471	·000342	$\bar{4}$·5418131
·007	·063	·00345	$\bar{3}$·5378893	·05874	·000432	$\bar{4}$·6416600
·008	·072	·00398	$\bar{3}$·6005440	·06313	·000531	$\bar{4}$·7287594
·009	·081	·00447	$\bar{3}$·6512548	·06693	·000639	$\bar{4}$·8051184
·010	·090	·00497	$\bar{3}$·6968303	·07053	·000747	$\bar{4}$·8736475
·011	·099	·00547	$\bar{3}$·7380781	·07396	·000864	$\bar{4}$·9356647
·02	·18	·00990	$\bar{3}$·9959743	·09953	·002106	$\bar{3}$·3240379
·03	·27	·01479	$\bar{2}$·1699789	·10863	·003861	$\bar{3}$·5868263
·04	·36	·01958	$\bar{2}$·2918226	·13976	·005931	$\bar{3}$·7728807
·05	·45	·02438	$\bar{2}$·3871899	·15615	·008253	$\bar{3}$·9168781
·06	·54	·02915	$\bar{2}$·4646968	·17074	·010818	$\bar{2}$·0343050
·07	·63	·03384	$\bar{2}$·5295204	·18397	·013590	$\bar{2}$·1333632
·08	·72	·03849	$\bar{2}$·5853836	·19619	·016551	$\bar{2}$·2189865
·09	·81	·04309	$\bar{2}$·6343860	·20758	·019692	$\bar{2}$·2943394
·10	·90	·04763	$\bar{2}$·6779699	·21826	·022986	$\bar{2}$·3615803
·11	·99	·05214	$\bar{2}$·7171827	·22831	·026433	$\bar{2}$·4222758
·12	1·08	·05659	$\bar{2}$·7527647	·23789	·030024	$\bar{2}$·4775417
·13	1·17	·06099	$\bar{2}$·7853106	·24697	·033741	$\bar{2}$·5282665
·14	1·26	·06386	$\bar{2}$·8152605	·25564	·037593	$\bar{2}$·5751135
·15	1·35	·06965	$\bar{2}$·8429743	·26392	·041553	$\bar{2}$·6186200
·16	1·44	·07391	$\bar{2}$·8687290	·27187	·045621	$\bar{2}$·6592076
·17	1·53	·07812	$\bar{2}$·8927739	·27950	·049797	$\bar{2}$·6972424
·18	1·62	·08227	$\bar{2}$·9152897	·28684	·054072	$\bar{2}$·7330040
·19	1·71	·08638	$\bar{2}$·9364448	·29391	·058446	$\bar{2}$·7667380
·20	1·80	·09044	$\bar{2}$·9563787	·30073	·062901	$\bar{2}$·7986575
·21	1·89	·09445	$\bar{2}$·9752058	·30732	·067437	$\bar{2}$·8289346
·22	1·98	·09840	$\bar{2}$·9930258	·31369	·072063	$\bar{2}$·8577191
·23	2·07	·10231	$\bar{1}$·0099269	·31986	·076761	$\bar{2}$·8851438
·24	2·16	·10616	$\bar{1}$·0259882	·32583	·081531	$\bar{2}$·9113258
·25	2·25	·10996	$\bar{1}$·0412711	·33161	·086364	$\bar{2}$·9363610
·26	2·34	·11372	$\bar{1}$·0558399	·33722	·091269	$\bar{2}$·9603420
·27	2·43	·11742	$\bar{1}$·0697449	·34266	·096237	$\bar{2}$·9833471
·28	2·52	·12106	$\bar{1}$·0830304	·34794	·101259	$\bar{1}$·0054433
·29	2·61	·12466	$\bar{1}$·0957392	·35307	·106335	$\bar{1}$·0266946
·30	2·70	·12820	$\bar{1}$·1079072	·35805	·111465	$\bar{1}$·0471560
·31	2·79	·13199	$\bar{1}$·1195738	·36289	·116649	$\bar{1}$·0668810
·32	2·88	·13513	$\bar{1}$·1307571	·36760	·121869	$\bar{1}$·0859133
·33	2·97	·13851	$\bar{1}$·1414963	·37217	·127143	$\bar{1}$·1042963
·34	3·06	·14184	$\bar{1}$·1518089	·37662	·132453	$\bar{1}$·1220636
·35	3·15	·14511	$\bar{1}$·1617228	·38094	·137799	$\bar{1}$·1392531
·36	3·24	·14834	$\bar{1}$·1712584	·38514	·143181	$\bar{1}$·1558973
·37	3·33	·15150	$\bar{1}$·1804272	·38923	·148599	$\bar{1}$·1720208
·38	3·42	·15462	$\bar{1}$·1892528	·39321	·154044	$\bar{1}$·1876527
·39	3·51	·15766	$\bar{1}$·1977438	·39707	·159516	$\bar{1}$·2028180
·40	3·60	·16067	$\bar{1}$·2059443	·40084	·165015	$\bar{1}$·2318330
·41	3·69	·16361	$\bar{1}$·2138166	·40449	·170541	$\bar{1}$·2318330
·42	3·78	·16649	$\bar{1}$·2214126	·40804	·176085	$\bar{1}$·2457251
·43	3·87	·16832	$\bar{1}$·2287296	·41149	·181647	$\bar{1}$·2592282
·44	3·96	·17210	$\bar{1}$·2357815	·41484	·187218	$\bar{1}$·2723619
·45	4·05	·17481	$\bar{1}$·2425778	·41810	·192687	$\bar{1}$·2851418
·46	4·14	·17743	$\bar{1}$·2490447	·42123	·198414	$\bar{1}$·2975797
·47	4·23	·18008	$\bar{1}$·2554675	·42435	·205021	$\bar{1}$·3096904
·48	4·32	·18260	$\bar{1}$·2615112	·42732	·209646	$\bar{1}$·3214865
·49	4·41	·18508	$\bar{1}$·2673653	·43021	·215271	$\bar{1}$·3329810
·50	4·50	·18750	$\bar{1}$·2730013	·43301	·220893	$\bar{1}$·3441821

TABLE IX—*continued*

Depth on Inverted — by Diameter	Depth on Invert in Feet	Hydraulic Mean Depth R in Feet	log (R)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet	log (A.)
.01	4.59	1.8986	1.2784302	1.3773	2.2612	1.3541030
.02	4.68	1.9215	1.2834457	1.3863	2.3213	1.3657206
.03	4.77	1.9437	1.2886337	1.4087	2.3773	1.3761302
.04	4.86	1.9649	1.2936616	1.4338	2.4336	1.3862652
.05	4.95	1.9866	1.2981201	1.4571	2.4896	1.3961486
.06	5.04	2.0070	1.3026068	1.4800	2.5456	1.4057939
.07	5.13	2.0268	1.3068293	1.5020	2.6013	1.4152061
.08	5.22	2.0460	1.3109114	1.5232	2.6568	1.4243919
.09	5.31	2.0644	1.3148122	1.5436	2.7124	1.4333596
.10	5.40	2.0824	1.3186741	1.5633	2.7676	1.4421123
.11	5.49	2.0994	1.3221104	1.5820	2.8126	1.4506576
.12	5.58	2.1159	1.3256018	1.5999	2.8773	1.4589996
.13	5.67	2.1316	1.3287249	1.6170	2.9340	1.4671427
.14	5.76	2.1467	1.3317816	1.6333	2.9802	1.4750918
.15	5.85	2.1611	1.3346765	1.6487	3.0398	1.4828523
.16	5.94	2.1747	1.3374060	1.6634	3.0933	1.4904260
.17	6.03	2.1876	1.3399719	1.6772	3.1464	1.4978170
.18	6.12	2.1997	1.3423667	1.6901	3.1991	1.5050301
.19	6.21	2.2111	1.3446261	1.7023	3.2513	1.5120669
.20	6.30	2.2217	1.3466971	1.7136	3.3031	1.5189307
.21	6.39	2.2316	1.3486124	1.7239	3.3544	1.5256237
.22	6.48	2.2409	1.3503638	1.7334	3.4052	1.5321492
.23	6.57	2.2487	1.3519496	1.7421	3.4554	1.5385087
.24	6.66	2.2561	1.3533687	1.7498	3.5051	1.5447047
.25	6.75	2.2626	1.3546181	1.7567	3.5541	1.5507379
.26	6.84	2.2682	1.3556948	1.7626	3.6022	1.5566097
.27	6.93	2.2729	1.3565971	1.7679	3.6492	1.5623224
.28	7.02	2.2767	1.3573196	1.7721	3.6950	1.5678755
.29	7.11	2.2796	1.3578590	1.7745	3.7396	1.5732706
.30	7.20	2.2814	1.3582079	1.7764	3.7828	1.5785092
.31	7.29	2.2822	1.3583672	1.7773	3.8346	1.5835871
.32	7.38	2.2820	1.3583218	1.7770	3.8771	1.5885075
.33	7.47	2.2806	1.3580663	1.7756	3.9199	1.5932692
.34	7.56	2.2782	1.3576922	1.7730	3.9615	1.5978716
.35	7.65	2.2744	1.3568862	1.7691	4.0023	1.6023114
.36	7.74	2.2695	1.3559371	1.7639	4.0419	1.6065886
.37	7.83	2.2632	1.3547278	1.7573	4.0803	1.6106995
.38	7.92	2.2554	1.3532400	1.7491	4.1179	1.6146413
.39	8.01	2.2462	1.3514504	1.7394	4.1534	1.6184095
.40	8.10	2.2352	1.3493310	1.7278	4.1879	1.6220007
.41	8.19	2.2225	1.3468469	1.7143	4.2209	1.6254073
.42	8.28	2.2077	1.3439033	1.6986	4.2523	1.6286230
.43	8.37	2.1907	1.3405018	1.6805	4.2819	1.6316384
.44	8.46	2.1711	1.3366823	1.6595	4.3096	1.6344414
.45	8.55	2.1487	1.3321839	1.6354	4.3351	1.6370174
.46	8.64	2.1218	1.3267120	1.6063	4.3561	1.6393457
.47	8.73	2.0902	1.3202006	1.5713	4.3792	1.6413930
.48	8.82	2.0466	1.3120414	1.5291	4.3967	1.6431343
.489	8.901	2.0054	1.3022210	1.4782	4.4091	1.6443638
.490	8.910	1.9991	1.3008382	1.4711	4.4103	1.6444768
.491	8.919	1.9928	1.2994699	1.4641	4.4114	1.6445843
.492	8.928	1.9859	1.2979707	1.4564	4.4125	1.6446856
.493	8.937	1.9788	1.2963316	1.4485	4.4136	1.6447813
.494	8.946	1.9708	1.2946436	1.4393	4.4144	1.6448609
.495	8.955	1.9622	1.2927630	1.4292	4.4152	1.6449318
.496	8.964	1.9528	1.2906748	1.4181	4.4164	1.6450207
.497	8.973	1.9422	1.2883017	1.4070	4.4165	1.6450912
.498	8.982	1.9296	1.2854837	1.3928	4.4171	1.6451465
.499	8.991	1.8768	1.2734343	1.3322	4.4176	1.6451800
1.000	9.000	1.8750	1.2730013	1.3301	4.4178	1.6452124

TABLE IX.—PIPE NINE INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·009	·00049	4·6969090	·02230	·000018	5·3733718
·002	·018	·00099	4·9989192	·03158	·000063	5·8256695
·003	·027	·00119	3·0756967	·03450	.000117	4·0905636
·004	·036	·00199	3·3003432	·04468	·000189	4·2777524
·005	·045	·00249	3·3973901	·04996	·000261	4·4231434
·006	·054	·00299	3·4762112	·05471	·000342	4·5418131
·007	·063	·00345	3·5378893	·05874	·000432	4·6416600
·008	·072	·00398	3·6005440	·06313	·000531	4·7287594
·009	·081	·00447	3·6512548	·06693	·000639	4·8051184
·010	·090	·00497	3·6968303	·07053	·000747	4·8736475
·011	·099	·00547	3·7380781	·07396	·000864	4·9356647
·02	·18	·00990	3·9959743	·09953	·002106	3·3240379
·03	·27	·01479	2·1699789	·10863	·003861	3·5868263
·04	·36	·01958	2·2918226	·13976	·005931	3·7728807
·05	·45	·02438	2·3871899	·15615	·008253	3·9168781
·06	·54	·02915	2·4646968	·17074	·010818	2·0343050
·07	·63	·03384	2·5295204	·18397	·013590	2·1333632
·08	·72	·03849	2·5853836	·19619	·016551	2·2189865
·09	·81	·04309	2·6343860	·20758	·019692	2·2943394
·10	·90	·04763	2·6779699	·21826	·022986	2·3615803
·11	·99	·05214	2·7171827	·22831	·026433	2·4222758
·12	1·08	·05659	2·7527647	·23789	·030024	2·4775417
·13	1·17	·06099	2·7853106	·24697	·033741	2·5282665
·14	1·26	·06386	2·8152605	·25564	·037593	2·5751135
·15	1·35	·06965	2·8429743	·26392	·041553	2·6186200
·16	1·44	·07391	2·8687290	·27187	·045621	2·6592076
·17	1·53	·07812	2·8927739	·27950	·049797	2·6972424
·18	1·62	·08227	2·9152897	·28684	·054072	2·7330040
·19	1·71	·08638	2·9364448	·29391	·058446	2·7667380
·20	1·80	·09044	2·9563787	·30073	·062901	2·7986575
·21	1·89	·09445	2·9752058	·30732	·067437	2·8289346
·22	1·98	·09840	2·9930258	·31369	·072063	2·8577191
·23	2·07	·10231	1·0099269	·31986	·076761	2·8851438
·24	2·16	·10616	1·0259882	·32583	·081531	2·9113258
·25	2·25	·10996	1·0412711	·33161	·086364	2·9363610
·26	2·34	·11372	1·0558399	·33722	·091269	2·9603420
·27	2·43	·11742	1·0697449	·34266	·096237	2·9833471
·28	2·52	·12106	1·0830304	·34794	·101259	1·0054433
·29	2·61	·12466	1·0957392	·35307	·106335	1·0266946
·30	2·70	·12820	1·1079072	·35805	·111465	1·0471560
·31	2·79	·13199	1·1195738	·36289	·116649	1·0668810
·32	2·88	·13513	1·1307571	·36760	·121869	1·0859133
·33	2·97	·13851	1·1414963	·37217	·127143	1·1042963
·34	3·06	·14184	1·1518089	·37662	·132453	1·1220636
·35	3·15	·14511	1·1617228	·38094	·137799	1·1392531
·36	3·24	·14834	1·1712584	·38514	·143181	1·1558973
·37	3·33	·15150	1·1804272	·38923	·148599	1·1720208
·38	3·42	·15462	1·1892528	·39321	·154044	1·1876527
·39	3·51	·15766	1·1977408	·39707	·159516	1·2028180
·40	3·60	·16067	1·2059443	·40084	·165015	1·2318330
·41	3·69	·16361	1·2138166	·40449	·170541	1·2318330
·42	3·78	·16649	1·2214126	·40804	·176085	1·2457251
·43	3·87	·16832	1·2287296	·41149	·181647	1·2592282
·44	3·96	·17210	1·2357815	·41484	·187218	1·2723619
·45	4·05	·17481	1·2425778	·41810	·192687	1·2851118
·46	4·14	·17743	1·2490447	·42123	·198414	1·2975797
·47	4·23	·18008	1·2554675	·42435	·205021	1·3096901
·48	4·32	·18260	1·2615112	·42732	·209646	1·3214865
·49	4·41	·18508	1·2673653	·43021	·215271	1·3329810
·50	4·50	·18750	1·2730013	·43301	·220893	1·3441824

TABLE IX—*continued.*

Depth on Invert—by Diameter	Depth on Invert in Ft.	Hydraulic Mean Depth R in Feet.	log (R)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log (A.)
.51	4.59	18986	I.2784352	43573	226512	I.3551030
.52	4.68	19215	I.2834457	43835	232137	I.3657506
.53	4.77	19437	I.2886337	44087	237753	I.3761352
.54	4.86	19653	I.2935616	44338	243369	I.3862602
.55	4.95	19866	I.2981201	44571	248967	I.3961486
.56	5.04	20070	I.3025668	44800	254556	I.4057939
.57	5.13	20268	I.3068293	45020	260136	I.4152061
.58	5.22	20460	I.3109114	45232	265698	I.4243919
.59	5.31	20644	I.3148122	45436	271242	I.4333596
60	5.40	20824	I.3185741	45633	276768	I.4421123
61	5.49	20994	I.3221104	45820	281267	I.4506576
62	5.58	21159	I.3255018	45999	287739	I.4589996
63	5.67	21316	I.3287249	46170	293409	I.4671427
64	5.76	21467	I.3317816	46333	298602	I.4750918
65	5.85	21611	I.3346765	46487	303984	I.4828523
66	5.94	21747	I.3374060	46634	309330	I.4904260
67	6.03	21876	I.3399719	46772	314640	I.4978170
68	6.12	21997	I.3423667	46901	319914	I.5050301
69	6.21	22111	I.3446261	47023	325134	I.5120669
70	6.30	22217	I.3466971	47135	330318	I.5189307
71	6.39	22315	I.3486124	47239	335448	I.5256237
72	6.48	22405	I.3503638	47334	340524	I.5321492
73	6.57	22487	I.3519496	47421	345546	I.5385087
74	6.66	22561	I.3533687	47498	350514	I.5447047
75	6.75	22626	I.3546181	47567	355419	I.5507379
76	6.84	22682	I.3556948	47626	360252	I.5566097
77	6.93	22729	I.3565971	47675	365022	I.5623224
78	7.02	22767	I.3573196	47715	369720	I.5678765
79	7.11	22796	I.3578695	47745	374346	I.5732706
80	7.20	22814	I.3582079	47764	378782	I.5785052
81	7.29	22822	I.3583672	47773	383346	I.5835871
82	7.38	22820	I.3584218	47770	387711	I.5885075
83	7.47	22806	I.3580663	47756	391959	I.5932692
84	7.56	22782	I.3574922	47730	396156	I.5978716
85	7.65	22744	I.3568862	47691	400230	I.6023114
86	7.74	22695	I.3559371	47639	404190	I.6065886
87	7.83	22632	I.3547278	47573	408033	I.6106995
88	7.92	22554	I.3532400	47491	411759	I.6146413
89	8.01	22462	I.3514504	47394	415341	I.6184095
90	8.10	22352	I.3493310	47278	418797	I.6220007
91	8.19	22225	I.3468469	47143	422091	I.6254073
92	8.28	22077	I.3439531	46986	425232	I.6286230
93	8.37	21907	I.3405918	46805	428193	I.6316384
94	8.46	21711	I.3366823	46595	430960	I.6344414
95	8.55	21487	I.3321839	46354	433521	I.6370174
96	8.64	21218	I.3267120	46063	435861	I.6393457
97	8.73	20902	I.3202006	45719	437922	I.6413930
98	8.82	20466	I.3120414	45231	439677	I.6431343
989	8.901	20054	I.3022210	44782	440919	I.6443638
990	8.910	19991	I.3008382	44711	441036	I.6444768
991	8.919	19928	I.2994699	44641	441144	I.6445843
992	8.928	19859	I.2979707	44564	441252	I.6446856
993	8.937	19788	I.2966316	44495	441351	I.6447813
994	8.946	19708	I.2946436	44393	441441	I.6448699
995	8.955	19622	I.2927530	44292	441522	I.6449518
996	8.964	19528	I.2906748	44191	441694	I.6450257
997	8.973	19422	I.2883017	44070	441657	I.6450912
998	8.982	19296	I.2854837	43928	441711	I.6451465
999	8.991	18768	I.2744343	43322	441756	I.6451830
1.000	9.000	18750	I.2730013	43301	441786	I.6452124

TABLE X.—PIPE TEN INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·01	·00055	$\bar{4}$·7426665	·02351	·000028	$\bar{5}$·4648868
·002	·02	·00110	$\bar{3}$·0446767	·03329	·000082	$\bar{5}$·9171845
·003	·03	·00132	$\bar{3}$·1214542	·03636	·000152	$\bar{4}$·1820786
·004	·04	·00221	$\bar{3}$·3461007	·04710	·000234	$\bar{4}$·3692674
·005	·05	·00277	$\bar{3}$·4431476	·05267	·000326	$\bar{4}$·5146584
·006	·06	·00332	$\bar{3}$·5219687	·05767	·000429	$\bar{4}$·6333281
·007	·07	·00383	$\bar{3}$·5836468	·06191	·000540	$\bar{4}$·7331750
·008	·08	·00442	$\bar{3}$·6463015	·06655	·000660	$\bar{4}$·8202744
·009	·09	·00497	$\bar{3}$·6970113	·07055	·000788	$\bar{4}$·8966334
·010	·10	·00552	$\bar{3}$·7425878	·07435	·000922	$\bar{4}$·9651625
·011	·11	·00607	$\bar{3}$·7838356	·07796	·001064	$\bar{3}$·0271797
·02	·2	·01100	$\bar{2}$·0417318	·10492	·002603	$\bar{3}$·4155529
·03	·3	·01643	$\bar{2}$·2157364	·12819	·004768	$\bar{3}$·6783413
·04	·4	·02175	$\bar{2}$·3375801	·14750	·007318	$\bar{3}$·8643957
·05	·5	·02709	$\bar{2}$·4329474	·16462	·010194	$\bar{2}$·0083931
·06	·6	·03239	$\bar{2}$·5104543	·17998	·013360	$\bar{2}$·1258200
·07	·7	·03760	$\bar{2}$·5752779	·19392	·016783	$\bar{2}$·2248782
·08	·8	·04277	$\bar{2}$·6311411	·20681	·020440	$\bar{2}$·3105015
·09	·9	·04787	$\bar{2}$·6801435	·21881	·024313	$\bar{2}$·3858544
·10	1·0	·05294	$\bar{2}$·7238274	·23010	·028385	$\bar{2}$·4530953
·11	1·1	·05793	$\bar{2}$·7629399	·24069	·032642	$\bar{2}$·5137908
·12	1·2	·06288	$\bar{2}$·7985222	·25076	·037072	$\bar{2}$·5690567
·13	1·3	·06777	$\bar{2}$·8310681	·26033	·041664	$\bar{2}$·6197815
·14	1·4	·07261	$\bar{2}$·8610180	·26947	·046408	$\bar{2}$·6666285
·15	1·5	·07739	$\bar{2}$·8887318	·27820	·051300	$\bar{2}$·7101350
·16	1·6	·08212	$\bar{2}$·9144865	·28658	·056324	$\bar{2}$·7507226
·17	1·7	·08680	$\bar{2}$·9385314	·29462	·061468	$\bar{2}$·7887574
·18	1·8	·09142	$\bar{2}$·9610482	·30236	·066760	$\bar{2}$·8245190
·19	1·9	·09598	$\bar{2}$·9822023	·30982	·072152	$\bar{2}$·8582530
·20	2·0	·10049	$\bar{1}$·0021362	·31701	·077652	$\bar{2}$·8901725
·21	2·1	·10494	$\bar{1}$·0209633	·32395	·083260	$\bar{2}$·9204496
·22	2·2	·10934	$\bar{1}$·0387833	·33067	·088968	$\bar{2}$·9492341
·23	2·3	·11368	$\bar{1}$·0556844	·33717	·094764	$\bar{2}$·9766588
·24	2·4	·11796	$\bar{1}$·0719457	·34346	·100656	$\bar{1}$·0028408
·25	2·5	·12218	$\bar{1}$·0870286	·34955	·106628	$\bar{1}$·0278760
·26	2·6	·12635	$\bar{1}$·1015974	·35547	·112680	$\bar{1}$·0518570
·27	2·7	·13044	$\bar{1}$·1154024	·36116	·118812	$\bar{1}$·0748621
·28	2·8	·13452	$\bar{1}$·1287879	·36677	·125012	$\bar{1}$·0969583
·29	2·9	·13851	$\bar{1}$·1414967	·37217	·131280	$\bar{1}$·1182096
·30	3·0	·14245	$\bar{1}$·1536657	·37743	·137616	$\bar{1}$·1386710
·31	3·1	·14633	$\bar{1}$·1653313	·38253	·144008	$\bar{1}$·1583960
·32	3·2	·15014	$\bar{1}$·1765136	·38749	·150460	$\bar{1}$·1774283
·33	3·3	·15390	$\bar{1}$·1872538	·39231	·156968	$\bar{1}$·1958113
·34	3·4	·15760	$\bar{1}$·1975664	·39699	·163520	$\bar{1}$·2135786
·35	3·5	·16124	$\bar{1}$·2074803	·40155	·170124	$\bar{1}$·2307681
·36	3·6	·16482	$\bar{1}$·2170159	·40598	·176768	$\bar{1}$·2474123
·37	3·7	·16834	$\bar{1}$·2261847	·41029	·183456	$\bar{1}$·2635358
·38	3·8	·17179	$\bar{1}$·2350103	·41448	·190180	$\bar{1}$·2791677
·39	3·9	·17199	$\bar{1}$·2435083	·41856	·196936	$\bar{1}$·2943330
·40	4·0	·17852	$\bar{1}$·2517018	·42253	·203728	$\bar{1}$·3233480
·41	4·1	·18174	$\bar{1}$·2595741	·42637	·210548	$\bar{1}$·3233480
·42	4·2	·18500	$\bar{1}$·2671701	·43012	·217388	$\bar{1}$·3372401
·43	4·3	·18814	$\bar{1}$·2744871	·43376	·224252	$\bar{1}$·3507432
·44	4·4	·19122	$\bar{1}$·2815391	·43729	·231140	$\bar{1}$·3638769
·45	4·5	·19424	$\bar{1}$·2883353	·44072	·238040	$\bar{1}$·3766568
·46	4·6	·19715	$\bar{1}$·2948012	·44402	·244956	$\bar{1}$·3890947
·47	4·7	·20009	$\bar{1}$·3012250	·44731	·251884	$\bar{1}$·4012051
·48	4·8	·20289	$\bar{1}$·3072687	·45044	·258824	$\bar{1}$·4130015
·49	4·9	·20565	$\bar{1}$·3131228	·45349	·265760	$\bar{1}$·4244960
·50	5·0	·20833	$\bar{1}$·3187588	·45643	·272704	$\bar{1}$·4356974

TABLE X—*continued*

Depth on Invert—by Diameter	Depth on Invert in Ins	Hydraulic Mean Depth R in Feet	log (R.)	$\sqrt{R}$ in Feet	Area of Cross Section in Square Feet.	log (A.)
51	51	21095	I 3241927	45930	27965	I 4466180
52	52	21351	I 3294042	46206	28653	I 4572609
53	53	21597	I 3343312	46526	29352	I 4676502
54	54	21843	I 3393191	46736	30045	I 4777802
55	55	22073	I 3438776	46982	30736	I 4876636
56	56	22301	I 3483243	47224	31427	I 4973089
57	57	22521	I 3525868	47456	32115	I 5067211
58	58	22733	I 3566689	47680	32802	I 5159069
59	59	22939	I 3606707	47894	33486	I 5248746
60	60	23138	I 3643316	48102	34168	I 5336273
61	61	23327	I 3678679	48295	34848	I 5421726
62	62	23510	I 3712593	48487	35523	I 5505146
63	63	23685	I 3744824	48668	36195	I 5586577
64	64	23858	I 3775391	48839	36864	I 5666068
65	65	24012	I 3804340	49002	37528	I 5743673
66	66	24164	I 3831635	49156	38189	I 5819410
67	67	24307	I 3857294	49302	38844	I 5893320
68	68	24441	I 3881242	49438	39495	I 5965451
69	69	24568	I 3903736	49566	40140	I 6035819
70	70	24686	I 3924546	49685	40776	I 6104457
71	71	24795	I 3943699	49796	41412	I 6171387
72	72	24895	I 3961213	49895	42040	I 6236642
73	73	24990	I 3977071	49987	42660	I 6300237
74	74	25068	I 3991262	50068	43272	I 6362197
75	75	25140	I 4003756	50140	43876	I 6422529
76	76	25203	I 4014523	50202	44472	I 6481247
77	77	25255	I 4023546	50255	45064	I 6538374
78	78	25297	I 4030771	50236	45644	I 6593905
79	79	25329	I 4036170	50328	46212	I 6647856
80	80	25349	I 4039654	50348	46772	I 6700202
81	81	25358	I 4041247	50357	47324	I 6751021
82	82	25355	I 4040793	50354	47864	I 6800221
83	83	25341	I 4038238	50340	48392	I 6847842
84	84	25313	I 4033497	50312	48908	I 6893866
85	85	25272	I 4026437	50271	49408	I 6938264
86	86	25217	I 4016946	50162	49900	I 6981036
87	87	25146	I 4004853	50147	50372	I 7022145
88	88	25061	I 3989979	50061	50832	I 7061763
89	89	24958	I 3972079	49958	51276	I 7099245
90	90	24836	I 3950885	49836	51700	I 7135157
91	91	24695	I 3926044	49691	52108	I 7169223
92	92	24531	I 3897108	49529	52496	I 7201380
93	93	24341	I 3863493	49337	52860	I 7231534
94	94	24123	I 3824338	49115	53204	I 7259564
95	95	23875	I 3779414	48862	53520	I 7285324
96	96	23579	I 3724635	48555	53808	I 7308607
97	97	23225	I 3659581	48192	54064	I 7329140
98	98	22793	I 3577989	47741	54280	I 7346491
989	989	22283	I 3479785	47205	54432	I 7358788
990	990	22213	I 3466957	47130	54448	I 7359918
991	991	22142	I 3452274	47056	54461	I 7360993
992	992	22066	I 3437282	46975	54472	I 7362006
993	993	21988	I 3423831	46902	54484	I 7362963
994	994	21858	I 3404011	46797	54496	I 7363849
995	995	21802	I 3385114	46633	54508	I 7364668
996	996	21633	I 3364323	46582	54516	I 7365407
997	997	21580	I 3340532	46454	54524	I 7366062
998	998	21441	I 3312412	45774	54532	I 7366615
999	999	20854	I 3191918	45666	54536	I 7367040
1000	1000	20833	I 3187588	45643	54540	I 7367264

TABLE XI.—PIPE ELEVEN INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·011	·00060	$\bar{4}$·7840592	·02466	·000035	$\bar{5}$·5476722
·002	·022	·00121	$\bar{3}$·0860694	·03491	·000099	5·9999699
·003	·033	·00145	$\bar{3}$·1628469	·03814	·000184	$\bar{1}$·2648670
·004	·044	·00244	$\bar{3}$·3874934	·04940	·000283	$\bar{1}$·4520528
·005	·055	·00305	$\bar{3}$·4845403	·05524	·000395	$\bar{1}$·5974438
·006	·066	·00365	$\bar{3}$·5633614	·06049	·000520	$\bar{1}$·7161135
·007	·077	·00421	$\bar{3}$·6250394	·06494	·000654	$\bar{1}$·8159604
·008	·088	·00487	$\bar{3}$·6876942	·06979	·000798	$\bar{1}$·9020598
·009	·099	·00547	$\bar{3}$·7384040	·07399	·000953	$\bar{1}$·9794188
·010	·110	·00608	$\bar{3}$·7839805	·07798	·001116	$\bar{3}$·0479479
·011	·121	·00668	$\bar{3}$·8252283	·09175	·001288	$\bar{3}$·1099651
·02	·22	·01211	$\bar{2}$·0831245	·11004	·003150	$\bar{3}$·4983383
·03	·33	·01807	$\bar{2}$·2571291	·13445	·005769	$\bar{3}$·7611267
·04	·44	·02393	$\bar{2}$·3789728	·15470	·008854	$\bar{3}$·9471811
·05	·55	·02980	$\bar{2}$·4743401	·17265	·012336	2·0911785
·06	·66	·03563	$\bar{2}$·5518470	·18877	·016166	$\bar{2}$·2086054
·07	·77	·04136	$\bar{2}$·6166706	·20339	·020307	$\bar{2}$·3076636
·08	·88	·04704	$\bar{2}$·6725348	·21690	·024733	$\bar{2}$·3928869
·09	·99	·05266	$\bar{2}$·7215362	·22949	·029419	$\bar{2}$·4686398
·10	1·10	·05822	$\bar{2}$·7651201	·24130	·034346	$\bar{2}$·5358807
·11	1·21	·06372	$\bar{2}$·8043329	·25244	·039498	$\bar{2}$·5965762
·12	1·32	·06916	$\bar{2}$·8399149	·26300	·044858	$\bar{2}$·6518421
·13	1·43	·07455	$\bar{2}$·8724608	·27304	·050415	$\bar{2}$·7025669
·14	1·54	·07987	$\bar{2}$·9024107	·28262	·056158	$\bar{2}$·7494139
·15	1·65	·08513	$\bar{2}$·9301245	·29178	·062075	$\bar{2}$·7929204
·16	1·76	·09033	$\bar{2}$·9558792	·30056	·068156	$\bar{2}$·8335080
·17	1·87	·09548	$\bar{2}$·9799231	·30900	·074394	$\bar{2}$·8715428
·18	1·98	·10056	$\bar{1}$·0024409	·31712	·080780	$\bar{2}$·9073044
·19	2·09	·10557	$\bar{1}$·0236050	·32494	·087304	$\bar{2}$·9410384
·20	2·20	·11054	$\bar{1}$·0435289	·33248	·093963	$\bar{2}$·9729579
·21	2·31	·11544	$\bar{1}$·0623560	·33976	·10074	$\bar{1}$·0032350
·22	2·42	·12027	$\bar{1}$·0801760	·34680	·10765	$\bar{1}$·0320195
·23	2·53	·12505	$\bar{1}$·0970771	·35362	·11466	$\bar{1}$·0594442
·24	2·64	·12976	$\bar{1}$·1131384	·36022	·12179	$\bar{1}$·0856262
·25	2·75	·13441	$\bar{1}$·1284213	·36662	·12902	$\bar{1}$·1106614
·26	2·86	·13902	$\bar{1}$·1430901	·37286	·13634	$\bar{1}$·1346424
·27	2·97	·14351	$\bar{1}$·1568951	·37883	·14376	$\bar{1}$·1576475
·28	3·08	·14797	$\bar{1}$·1701806	·38467	·15126	$\bar{1}$·1797437
·29	3·19	·15236	$\bar{1}$·1828894	·39034	·15885	$\bar{1}$·2009950
·30	3·30	·15669	$\bar{1}$·1950574	·39584	·16651	$\bar{1}$·2214564
·31	3·41	·16096	$\bar{1}$·2067240	·40120	·17425	$\bar{1}$·2411814
·32	3·52	·16512	$\bar{1}$·2179073	·40640	·18205	$\bar{1}$·2602137
·33	3·63	·16929	$\bar{1}$·2286465	·41146	·18993	$\bar{1}$·2785967
·34	3·74	·17336	$\bar{1}$·2389591	·41637	·19786	$\bar{1}$·2963640
·35	3·85	·17737	$\bar{1}$·2488730	·42115	·20585	$\bar{1}$·3135535
·36	3·96	·18130	$\bar{1}$·2584086	·42562	·21389	$\bar{1}$·3301977
·37	4·07	·18517	$\bar{1}$·2675774	·43031	·22198	$\bar{1}$·3463212
·38	4·18	·18897	$\bar{1}$·2764030	·43471	·23011	$\bar{1}$·3619531
·39	4·29	·19271	$\bar{1}$·2849010	·43899	·23829	$\bar{1}$·3771184
·40	4·40	·19638	$\bar{1}$·2930945	·44314	·24651	$\bar{1}$·3918386
·41	4·51	·19997	$\bar{1}$·3009668	·44718	·25476	$\bar{1}$·4061334
·42	4·62	·20350	$\bar{1}$·3085628	·45111	·26304	$\bar{1}$·4200255
·43	4·73	·20696	$\bar{1}$·3158798	·45492	·27134	$\bar{1}$·4335286
·44	4·84	·21034	$\bar{1}$·3229318	·45863	·27968	$\bar{1}$·4466623
·45	4·95	·21366	$\bar{1}$·3297280	·46223	·28803	$\bar{1}$·4594422
·46	5·06	·21687	$\bar{1}$·3361939	·46569	·29640	$\bar{1}$·4718801
·47	5·17	·22010	$\bar{1}$·3426177	·46914	·30478	$\bar{1}$·4839908
·48	5·28	·22318	$\bar{1}$·3486614	·47243	·31317	$\bar{1}$·4957869
·49	5·39	·22621	$\bar{1}$·3545155	·47561	·32157	$\bar{1}$·5072814
·50	5·50	·22917	$\bar{1}$·3601515	·47871	·32997	$\bar{1}$·5184827

TABLE XI—*continued*

Depth in Part—1/y Diameter	Depth in Parts in Ins	Hydraulic Mean Depth R in Feet.	log (R)	√R in Feet	Area of Cross Section in Square Feet.	log (A)
.51	5 61	23205	I 3655864	48172	33837	I 5294034
.52	5 72	23485	I 3707959	48481	34677	I 5400510
.53	5 83	23756	I 3757839	48741	35516	I 5504356
.54	5 94	24028	I 3807118	49018	36355	I 5605656
.55	6 05	24281	I 3852700	49276	37191	I 5704430
.56	6 16	24531	I 3897170	49528	38027	I 5800343
.57	6 27	24773	I 3939795	49772	38860	I 5893063
.58	6 38	25007	I 3980616	50007	39691	I 5980923
.59	6 49	25233	I 4019684	50232	40519	I 6076600
.60	6 60	25452	I 4057243	0450	41344	I 6164127
.61	6 71	25660	I 4092606	50676	42165	I 6245580
.62	6 82	25861	I 4126520	50854	42983	I 6333000
.63	6 93	26054	I 4158751	51043	43796	I 6414431
.64	7 04	26238	I 4189318	51223	44605	I 6493022
.65	7 15	26413	I 4218267	51372	45410	I 6571527
.66	7 26	26580	I 4246062	51556	46208	I 6647264
.67	7 37	26738	I 4271221	51708	47002	I 6721174
.68	7 48	26885	I 4296169	51829	47783	I 6793303
.69	7 59	27025	I 4317663	51986	48458	I 6853673
.70	7 70	27155	I 4338473	52110	49343	I 6932311
.71	7 81	27275	I 4357626	52226	50110	I 7000241
.72	7 92	27385	I 4374140	52331	50870	I 7064636
.73	8 03	27485	I 4390338	52426	51619	I 7128031
.74	8 14	27576	I 4404189	52512	52360	I 7190051
.75	8 25	27654	I 4417663	52588	53093	I 7250383
.76	8 36	27723	I 4428450	52653	53815	I 7309101
.77	8 47	27781	I 4437473	52708	54528	I 7366228
.78	8 58	27827	I 4444698	52751	55230	I 7421753
.79	8 69	27862	I 4450037	52784	55920	I 7475710
.80	8 80	27884	I 4453581	52805	56598	I 7528076
.81	8 90	27894	I 4455174	52815	57264	I 7578875
.82	9 02	27891	I 4454720	52812	57917	I 7628079
.83	9 13	27875	I 4452165	52797	58557	I 7675796
.84	9 24	27845	I 4447424	52768	59179	I 7721720
.85	9 35	27799	I 4440354	52725	59787	I 7766118
.86	9 46	27738	I 4430873	52668	60379	I 7808830
.87	9 57	27662	I 4418780	52594	60953	I 7849959
.88	9 68	27567	I 4403902	52504	61509	I 7887417
.89	9 79	27454	I 4386006	52397	62045	I 7922939
.90	9 90	27320	I 4364812	52269	62546	I 7962011
.91	10 01	27164	I 4339971	52119	63053	I 7997077
.92	10 12	26984	I 4311035	51946	63521	I 8026234
.93	10 23	26776	I 4277420	51746	63964	I 8051388
.94	10 34	26536	I 4238325	51513	64378	I 8071418
.95	10 45	26262	I 4193341	51247	64761	I 8113178
.96	10 56	25934	I 4138622	50925	65109	I 8136461
.97	10 67	25548	I 4073508	50545	65418	I 8151091
.98	10 78	25072	I 3991916	50072	65680	I 8174387
.985	10 879	24512	I 3893712	49509	65866	I 8186042
.990	10 890	24433	I 3879884	49436	65893	I 8187772
.991	10 901	24357	I 3866201	49353	65933	I 8188847
.992	10 912	24273	I 3851203	49268	65915	I 8188019
.993	10 923	24188	I 3837818	49182	65923	I 8186817
.994	10 934	24087	I 3817938	49079	65943	I 8181701
.995	10 945	23983	I 3799041	48972	65965	I 8172522
.996	10 956	23868	I 3778240	48855	65966	I 8162251
.997	10 967	23738	I 3754513	48722	65956	I 8149319
.998	10 978	23585	I 3726833	48564	65904	I 8131943
.999	10 989	22939	I 3601845	47871	65741	I 8114184
1.000	11 000	22117	I 3441515	47021	?	I 8114127

TABLE XIII.—PIPE FIFTEEN INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·015	·00082	$\bar{4}$·9187577	·02879	·000064	$\bar{5}$·8170693
·002	·030	·00166	$\bar{3}$·2207679	·04077	·000185	$\bar{4}$·2693670
·003	·045	·00198	$\bar{3}$·2975454	·01454	·000342	$\bar{4}$·5342611
·004	·060	·00332	$\bar{3}$·5521919	·05768	·000526	$\bar{4}$·7214499
·005	·075	·00416	$\bar{3}$·6192388	·06450	·000735	$\bar{4}$·8668409
·006	·090	·00498	$\bar{3}$·6980599	·07063	·000966	$\bar{4}$·9855106
·007	·105	·00575	$\bar{3}$·7597380	·07583	·001216	$\bar{3}$·0853575
·008	·120	·00664	$\bar{3}$·8223927	·08150	·001486	$\bar{3}$·1724569
·009	·135	·00746	$\bar{3}$·8731025	·08640	·001773	$\bar{3}$·2488159
·010	·150	·00829	$\bar{3}$·9186790	·09106	·002076	$\bar{3}$·3173452
·011	·165	·00911	$\bar{3}$·9599268	·09549	·002394	$\bar{3}$·3793622
·02	·30	·01651	$\bar{2}$·2178230	·12850	·005857	$\bar{3}$·7677354
·03	·45	·02465	$\bar{2}$·3918276	·15700	·010728	$\bar{2}$·0305238
·04	·60	·03263	$\bar{2}$·5136713	·18065	·016465	$\bar{2}$·2165782
·05	·75	·04064	$\bar{2}$·6090386	·20161	·022938	$\bar{2}$·3605756
·06	·90	·04859	$\bar{2}$·6865455	·22043	·030060	$\bar{2}$·4780025
·07	1·05	·05641	$\bar{2}$·7513691	·23751	·037762	$\bar{2}$·5770607
·08	1·20	·06415	$\bar{2}$·8072323	·25329	·045991	$\bar{2}$·6626840
·09	1·35	·07181	$\bar{2}$·8562347	·26799	·054705	$\bar{2}$·7380369
·10	1·50	·07939	$\bar{2}$·8998186	·28179	·063866	$\bar{2}$·8052778
·11	1·65	·08690	$\bar{2}$·9390314	·29479	·073446	$\bar{2}$·8659733
·12	1·80	·09432	$\bar{2}$·9746134	·30712	·083413	$\bar{2}$·9212392
·13	1·95	·10166	$\bar{1}$·0071593	·31884	·093744	$\bar{2}$·9719640
·14	2·10	·11145	$\bar{1}$·0471092	·33381	·104418	$\bar{1}$·0188110
·15	2·25	·11612	$\bar{1}$·0468230	·34073	·115425	$\bar{1}$·0623175
·16	2·40	·12319	$\bar{1}$·0905777	·35098	·116729	$\bar{1}$·1029051
·17	2·55	·13020	$\bar{1}$·1146226	·36084	·138303	$\bar{1}$·1409399
·18	2·70	·13713	$\bar{1}$·1371394	·37031	·150210	$\bar{1}$·1767015
·19	2·85	·14397	$\bar{1}$·1582935	·37944	·162342	$\bar{1}$·2104355
·20	3·00	·15074	$\bar{1}$·1782274	·38825	·174717	$\bar{1}$·2423550
·21	3·15	·15742	$\bar{1}$·1970545	·39676	·187335	$\bar{1}$·2726321
·22	3·30	·16401	$\bar{1}$·2148745	·40498	·200178	$\bar{1}$·3014166
·23	3·45	·17052	$\bar{1}$·2317756	·40540	·213219	$\bar{1}$·3288413
·24	3·60	·17694	$\bar{1}$·2478369	·42064	·226476	$\bar{1}$·3550233
·25	3·75	·18328	$\bar{1}$·2631198	·42811	·239913	$\bar{1}$·3800585
			·886	·43536	·253530	$\bar{1}$·4040395

TABLE XIII.—*continued*

Depth on In vert — by Diameter	Depth on In vert in Ins	Hydraulic Mean Depth R in Feet	log (R)	$\sqrt{R}$ in Feet	Area of Cross Section in Square Feet.	log (A)
·51	7 65	31643	I 5002839	56252	629217	I 7988005
·52	7 80	32025	I 5054944	56591	644832	I 8094481
·53	7 95	32395	I 5104824	56917	660438	I 8198327
·54	8 10	32763	I 5154103	57240	676017	I 8299627
·55	8 25	33110	I 5199688	57542	691578	I 8398461
56	8 40	33451	I 5244155	57837	707112	I 8494914
57	8 55	33781	I 5286780	58121	722601	I 8589036
·58	8 70	34101	I 5327601	58396	738054	I 8680894
59	8 85	34408	I 5366669	58653	753453	I 8770571
60	9 00	34707	I 5404228	58913	768789	I 8858098
61	9 15	34991	I 5439591	59153	784090	I 8943551
62	9 30	35265	I 5473505	59385	799272	I 9026971
63	9 45	35528	I 5506736	59605	814401	I 9108400
64	9 60	35779	I 5536303	59816	829440	I 9187893
65	9 75	36018	I 5565252	60085	844398	I 9265498
66	9 90	36245	I 5592547	60204	859257	I 9341235
67	10 05	36460	I 5618206	60382	873999	I 9415145
68	10 20	36662	I 5642154	60549	888642	I 9487276
69	10 35	36852	I 5664648	60706	90315	I 9557644
70	10 50	37029	I 5685458	60852	91746	I 9626282
71	10 65	37193	I 5704611	60986	93177	I 9693212
72	10 80	37343	I 5722125	61109	94590	I 9758467
73	10 95	37480	I 5737983	61220	95985	I 9822062
74	11 10	37602	I 5752174	61321	97362	I 9884022
75	11 25	37711	I 5764668	61409	98721	I 9944354
76	11 40	37805	I 5775435	61485	1 00062	0 0003072
77	11 55	37883	I 5784458	61549	1 01394	0 0060190
78	11 70	37946	I 5791683	61600	1 01699	0 0115730
·79	11 85	37993	I 5797082	61639	1 03977	0 0169681
80	12 00	38024	I 5800566	61663	1 05237	0 0222027
81	12 15	38038	I 5802159	61675	1 06479	0 0272846
82	12 30	38034	I 5801705	61672	1 07694	0 0322050
83	12 45	38011	I 5799150	61653	1 08882	0 0369667
84	12 60	37970	I 5794409	61620	1 10043	0 0415691
85	12 75	37908	I 5787349	61570	1 11168	0 0460089
86	12 90	37825	I 5777858	61502	1 12275	0 0502861
87	13 05	37720	I 5765765	61417	1 13347	0 0543970
88	13 20	37591	I 5750887	61312	1 14372	0 0583385
89	13 35	37436	I 5732991	61185	1 15371	0 0621070
90	13 50	37254	I 5711797	61036	1 16325	0 0656982
91	13 65	37041	I 5686956	60862	1 17243	0 0691048
92	13 80	36798	I 5658020	60660	1 18116	0 0723205
93	13 95	36513	I 5624405	60426	1 18935	0 0753359
94	14 10	36185	I 5585310	60154	1 19709	0 0781389
95	14 25	35812	I 5540326	59843	1 20420	0 0807149
96	14 40	35364	I 5485607	59468	1 21063	0 0830432
97	14 55	34837	I 5420493	59023	1 21644	0 0850965
98	14 70	34190	I 5338901	58472	1 22130	0 0868318
989	14 835	33425	I 5240697	57814	1 22472	0 0880613
990	14 850	33318	I 5226869	57722	1 22508	0 0881743
991	14 865	33213	I 5213186	57631	1 22537	0 0882818
992	14 880	33109	I 5198194	57518	1 22562	0 0883831
993	14 895	32998	I 5184803	57443	1 22589	0 0884784
994	14 910	32847	I 5164923	57312	1 22616	0 0885674
995	14 925	32704	I 5146026	57187	1 22623	0 0886493
996	14 940	32548	I 5125235	57051	1 22661	0 0887232
997	14 955	32371	I 5101504	56895	1 22679	0 0887887
998	14 970	32161	I 5073324	56711	1 22697	0 0888440
999	14 985	31281	I 4952830	55950	1 22706	0 0888885
1 000	15 000	31250	I 4938500	55902	1 22718	0 0889327

TABLE XIII.—PIPE FIFTEEN INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·015	·00082	$\bar{4}$·9187577	·02879	·000064	$\bar{5}$·8170693
·002	·030	·00166	$\bar{3}$·2207679	·04077	·000185	$\bar{4}$·2693670
·003	·045	·00198	$\bar{3}$·2975454	·04454	·000342	$\bar{4}$·5342611
·004	·060	·00332	$\bar{3}$·5521919	·05768	·000526	$\bar{4}$·7214499
·005	·075	·00416	$\bar{3}$·6192388	·06450	·000735	$\bar{4}$·8668409
·006	·090	·00498	$\bar{3}$·6980599	·07063	·000966	$\bar{4}$·9855106
·007	·105	·00575	$\bar{3}$·7597380	·07583	·001216	$\bar{3}$·0853575
·008	·120	·00664	$\bar{3}$·8223927	·08150	·001486	$\bar{3}$·1724569
·009	·135	·00746	$\bar{3}$·8731025	·08640	·001773	$\bar{3}$·2488159
·010	·150	·00829	$\bar{3}$·9186790	·09106	·002076	$\bar{3}$·3173452
·011	·165	·00911	$\bar{3}$·9599268	·09549	·002394	$\bar{3}$·3793622
·02	·30	·01651	$\bar{2}$·2178230	·12850	·005857	$\bar{3}$·7677354
·03	·45	·02465	$\bar{2}$·3918276	·15700	·010728	$\bar{2}$·0305238
·04	·60	·03263	$\bar{2}$·5136713	·18065	·016465	$\bar{2}$·2165782
·05	·75	·04064	$\bar{2}$·6090386	·20161	·022938	$\bar{2}$·3605756
·06	·90	·04859	$\bar{2}$·6865455	·22043	·030060	$\bar{2}$·4780025
·07	1·05	·05641	$\bar{2}$·7513691	·23751	·037762	$\bar{2}$·5770607
·08	1·20	·06415	$\bar{2}$·8072323	·25329	·045991	$\bar{2}$·6626840
·09	1·35	·07181	$\bar{2}$·8562347	·26799	·054705	$\bar{2}$·7380369
·10	1·50	·07939	$\bar{2}$·8998186	·28179	·063866	$\bar{2}$·8052778
·11	1·65	·08690	$\bar{2}$·9390314	·29479	·073446	$\bar{2}$·8659733
·12	1·80	·09432	$\bar{2}$·9746134	·30712	·083413	$\bar{2}$·9212392
·13	1·95	·10166	$\bar{1}$·0071593	·31884	·093744	$\bar{2}$·9719640
·14	2·10	·11145	$\bar{1}$·0471092	·33381	·104418	$\bar{1}$·0188110
·15	2·25	·11612	$\bar{1}$·0468230	·34073	·115425	$\bar{1}$·0623175
·16	2·40	·12319	$\bar{1}$·0905777	·35098	·116729	$\bar{1}$·1029051
·17	2·55	·13020	$\bar{1}$·1146226	·36084	·138303	$\bar{1}$·1409399
·18	2·70	·13713	$\bar{1}$·1371394	·37031	·150210	$\bar{1}$·1767015
·19	2·85	·14397	$\bar{1}$·1582935	·37944	·162342	$\bar{1}$·2104355
·20	3·00	·15074	$\bar{1}$·1782274	·38825	·174717	$\bar{1}$·2423550
·21	3·15	·15742	$\bar{1}$·1970545	·39676	·187335	$\bar{1}$·2726321
·22	3·30	·16401	$\bar{1}$·2148745	·40498	·200178	$\bar{1}$·3014166
·23	3·45	·17052	$\bar{1}$·2317756	·40540	·213219	$\bar{1}$·3288413
·24	3·60	·17694	$\bar{1}$·2478369	·42064	·226476	$\bar{1}$·3550233
·25	3·75	·18328	$\bar{1}$·2631198	·42811	·239913	$\bar{1}$·3800585
·26	3·90	·18953	$\bar{1}$·2776886	·43536	·253530	$\bar{1}$·4040395
·27	4·05	·19570	$\bar{1}$·2915936	·44238	·267327	$\bar{1}$·4270446
·28	4·20	·20178	$\bar{1}$·3048791	·44920	·281277	$\bar{1}$·4491408
·29	4·35	·20777	$\bar{1}$·3175879	·45582	·295380	$\bar{1}$·4703921
·30	4·50	·21367	$\bar{1}$·3297559	·46225	·309636	$\bar{1}$·4908535
·31	4·65	·21949	$\bar{1}$·3414225	·46851	·324018	$\bar{1}$·5105785
·32	4·80	·22522	$\bar{1}$·3526058	·47457	·338535	$\bar{1}$·5296108
·33	4·95	·23086	$\bar{1}$·3633450	·48048	·353178	$\bar{1}$·5479958
·34	5·10	·23640	$\bar{1}$·3736576	·48627	·367920	$\bar{1}$·5657611
·35	5·25	·24186	$\bar{1}$·3835715	·49180	·382779	$\bar{1}$·5829506
·36	5·40	·24723	$\bar{1}$·3931071	·49723	·397728	$\bar{1}$·5995948
·37	5·55	·25251	$\bar{1}$·4022759	·50250	·412776	$\bar{1}$·6157183
·38	5·70	·25769	$\bar{1}$·4111015	·50763	·427905	$\bar{1}$·6313502
·39	5·85	·26278	$\bar{1}$·4195995	·51262	·443106	$\bar{1}$·6465155
·40	6·00	·26779	$\bar{1}$·4277990	·51653	·458388	$\bar{1}$·6755305
·41	6·15	·27269	$\bar{1}$·4356653	·52220	·473733	$\bar{1}$·6755305
·42	6·30	·27750	$\bar{1}$·4432613	·52678	·489123	$\bar{1}$·6894226
·43	6·45	·28221	$\bar{1}$·4505783	·53123	·504567	$\bar{1}$·7029257
·44	6·60	·28683	$\bar{1}$·4576303	·53557	·520065	$\bar{1}$·7160594
·45	6·75	·29135	$\bar{1}$·4644265	·53978	·535590	$\bar{1}$·7288393
·46	6·90	·29573	$\bar{1}$·4708924	·54381	·551151	$\bar{1}$·7412772
·47	7·05	·30013	$\bar{1}$·4773162	·54784	·566739	$\bar{1}$·7533879
·48	7·20	·30434	$\bar{1}$·4833599	·55167	·582354	$\bar{1}$·7651840
·49	7·35	·30847	$\bar{1}$·4892140	·55540	·597960	$\bar{1}$·7766785
·50	7·50	·31250	$\bar{1}$·4939500	·55902	·613592	$\bar{1}$·7878799

TABLE XIII.—*continued*

Depth on In vert-by Diameter	Depth on In Feet in Ins	Hydraulic Mean Depth R In Feet.	log (R.)	$\sqrt{R}$ In Feet	Area of Cross Section In Square Feet	log (A)
51	7 65	31643	I 5002830	56252	629217	I 7988005
52	7 80	32025	I 5054944	56691	644832	I 8034481
53	7 95	32395	I 5104824	56917	660438	I 8198327
54	8 10	32765	I 5154103	57240	676017	I 8299627
55	8 25	33110	I 5199688	57542	691578	I 8398461
56	8 40	33451	I 5244155	57837	707112	I 8494914
57	8 55	33781	I 5286780	58121	722601	I 8589036
58	8 70	34101	I 5327601	58396	738054	I 8680894
59	8 85	34408	I 5366609	58659	753453	I 8770571
60	9 00	34707	I 5404228	58913	768789	I 8858039
61	9 15	34991	I 5439591	59153	784080	I 8943351
62	9 30	35265	I 5473605	59385	799272	I 9026971
63	9 45	35528	I 5505736	59605	814401	I 9108400
64	9 60	35779	I 5536303	59816	829440	I 9187893
65	9 75	36018	I 5565252	60085	844398	I 9265498
66	9 90	36245	I 5592447	60204	859257	I 9341235
67	10 05	36460	I 5618206	60382	873999	I 9415144
68	10 20	36662	I 5642154	60549	888642	I 9487276
69	10 35	36852	I 5664648	60706	903139	I 9557644
70	10 50	37029	I 5685458	60852	91746	I 9626282
71	10 65	37194	I 5704611	60986	93177	I 9693212
72	10 80	37343	I 5722125	61109	94590	I 9758467
73	10 95	37480	I 5737983	61220	95980	I 9822062
74	11 10	37602	I 5752174	61321	97362	I 9884022
75	11 25	37711	I 5764668	61409	98721	I 9944364
76	11 40	37805	I 5775435	61485	1 00062	0 0003072
77	11 55	37883	I 5784458	61549	1 01394	0 0060109
78	11 70	37946	I 5791683	61600	1 01609	0 0115730
79	11 85	37993	I 5797082	61639	1 03977	0 0169681
80	12 00	38024	I 5800566	61663	1 05237	0 0222027
81	12 15	38038	I 5802159	61675	1 06479	0 0272846
82	12 30	38034	I 5801701	61672	1 07694	0 0322090
83	12 45	38011	I 5799150	61653	1 08882	0 0369067
84	12 60	37970	I 5794405	61620	1 10043	0 0413631
85	12 75	37908	I 5787349	61570	1 11168	0 0460089
86	12 90	37825	I 5777858	61502	1 12277	0 0502801
87	13 05	37720	I 5765705	61417	1 13337	0 0543970
88	13 20	37591	I 5750887	61312	1 14372	0 0583385
89	13 35	37436	I 5732991	61183	1 15371	0 0621070
90	13 50	37254	I 5711797	61036	1 16329	0 0656982
91	13 65	37041	I 5686976	60862	1 17243	0 0691048
92	13 80	36798	I 5658020	60660	1 18116	0 0723209
93	13 95	36513	I 5624409	60426	1 18935	0 0753439
94	14 10	36183	I 5585310	60154	1 19703	0 0781389
95	14 25	35812	I 5540326	59843	1 20420	0 0807149
96	14 40	35364	I 5485607	59468	1 21068	0 0830432
97	14 55	34837	I 5420493	59023	1 21644	0 0850963
98	14 70	34190	I 5338901	58472	1 22130	0 0868318
989	14 835	33425	I 5240697	57814	1 22472	0 0880613
990	14 850	33318	I 5226869	57722	1 22508	0 0881743
991	14 865	33213	I 5213186	57631	1 22533	0 0882818
992	14 880	33109	I 5198194	57518	1 22562	0 0883831
993	14 895	32998	I 5184803	57443	1 22589	0 0884788
994	14 910	32847	I 5164923	57312	1 22616	0 0885674
995	14 925	32704	I 5146026	57187	1 22623	0 0886493
996	14 940	32548	I 5125236	57051	1 22661	0 0887232
997	14 955	32371	I 5101004	56895	1 22679	0 0887887
998	14 970	32161	I 5073824	56711	1 22697	0 0888440
999	14 985	31281	I 4952830	55930	1 22706	0
1 000	15 000	31250	I 4938600	55902	1 22718	0

TABLE XIV.—PIPE EIGHTEEN INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·018	·000995	$\bar{4}$·9979390	·031547	·000072	5·9754318
·002	·036	·001995	$\bar{3}$·2999492	·044665	·000252	$\bar{4}$·4277295
·003	·054	·002380	$\bar{3}$·3767267	·048793	·000468	$\bar{4}$·6926236
·004	·072	·003993	$\bar{3}$·6013732	·063195	·000756	$\bar{4}$·8798124
·005	·090	·004993	$\bar{3}$·6984201	·070667	·001044	$\bar{3}$·0252034
·006	·108	·005987	$\bar{3}$·7772412	·077377	·001368	$\bar{3}$·1438731
·007	·126	·006901	$\bar{3}$·8389193	·083073	·001728	$\bar{3}$·2437200
·008	·144	·007972	$\bar{3}$·9015740	·089286	·002124	$\bar{3}$·3308191
·009	·162	·008959	$\bar{3}$·9522838	·094654	·002556	$\bar{3}$·4071784
·010	·180	·009950	$\bar{3}$·9978603	·099754	·002988	$\bar{3}$·4757075
·011	·198	·01094	$\bar{2}$·0391081	·10460	·003456	$\bar{3}$·5377247
·02	·36	·01981	$\bar{2}$·2970043	·14076	·008424	$\bar{3}$·9260979
·03	·54	·02958	$\bar{2}$·4710089	·17199	·015444	$\bar{2}$·1888863
·04	·72	·03916	$\bar{2}$·5928526	·19789	·023724	$\bar{2}$·3749407
·05	·90	·04877	$\bar{2}$·6882199	·22085	·033012	$\bar{2}$·5189381
·06	1·08	·05830	$\bar{2}$·7657268	·24202	·043272	$\bar{2}$·6363650
·07	1·26	·06769	$\bar{2}$·8305504	·26018	·054360	$\bar{2}$·7354232
·08	1·44	·07698	$\bar{2}$·8864136	·27746	·066204	$\bar{2}$·8210465
·09	1·62	·08618	$\bar{2}$·9354160	·29356	·078768	$\bar{2}$·8963994
·10	1·80	·09527	$\bar{2}$·9789999	·30867	·091944	$\bar{2}$·9636403
·11	1·98	·10428	1·0182127	·32292	·105732	1·0243358
·12	2·16	·11318	1·0537947	·33643	·120096	1·0796017
·13	2·34	·12199	1·0863406	·34927	·134964	1·1303265
·14	2·52	·13070	1·1162905	·36153	·150372	1·1771735
·15	2·70	·13931	1·1440043	·37325	·166212	1·2206800
·16	2·88	·14782	1·1697590	·38448	·182484	1·2612676
·17	3·06	·15660	1·1938039	·39446	·199188	1·2993024
·18	3·24	·16455	1·2163207	·40565	·216288	1·3350640
·19	3·42	·17277	1·2374748	·41566	·233784	1·3687980
·20	3·60	·18088	1·2574087	·42531	·251604	1·4007175
·21	3·78	·18890	1·2762358	·43462	·269748	1·4309946
·22	3·98	·19681	1·2940558	·44363	·288252	1·4597791
·23	4·14	·20462	1·3109569	·45235	·307044	1·4872038
·24	4·32	·21282	1·3270182	·46079	·326124	1·5133858
·25	4·50	·21993	1·3423011	·46898	·345456	1·5384210
·26	4·68	·22744	1·3568699	·47690	·365076	1·5624020
·27	4·86	·23484	1·3707749	·48460	·384948	1·5854071
·28	5·04	·24213	1·3840604	·49207	·405036	1·6075033
·29	5·22	·24932	1·3967692	·49932	·425340	1·6287546
·30	5·40	·25641	1·4089372	·50637	·445860	1·6492160
·31	5·58	·26339	1·4206038	·51321	·466596	1·6689410
·32	5·76	·27026	1·4317871	·51986	·487476	1·6879733
·33	5·94	·27703	1·4425263	·52633	·508572	1·7062563
·34	6·12	·28368	1·4528389	·53262	·529812	1·7241236
·35	6·30	·29024	1·4627528	·53873	·551196	1·7413131
·36	6·48	·29668	1·4722884	·54468	·572724	1·7579573
·37	6·66	·30301	1·4814572	·55046	·594396	1·7740808
·38	6·84	·30923	1·4902828	·55608	·616176	1·7897127
·39	7·02	·31534	1·4987808	·56155	·638064	1·8048780
·40	7·20	·32134	1·5069743	·56687	·660060	1·8338930
·41	7·38	·32722	1·5148466	·57203	·682164	1·8338930
·42	7·56	·33299	1·5224426	·57706	·701340	1·8477851
·43	7·74	·33865	1·5297596	·58194	·726588	1·8612882
·44	7·92	·34420	1·5368116	·58668	·748872	1·8744219
·45	8·10	·34963	1·5436078	·59129	·770748	1·8872018
·46	8·28	·35487	1·5500737	·59571	·793656	1·8996397
·47	8·46	·36016	1·5661975	·60016	·820084	1·9117504
·48	8·64	·36520	1·5625412	·60432	·838584	1·9235465
·49	8·82	·37016	1·5683953	·60841	·861084	1·9350419
·50	9·00	·37500	1·5740313	·61237	·883572	1·9462424

TABLE XIV—*continued.*

Depth on In vert—1 by Diameter	Depth on In vert in Ins	Hydraulic Mean Depth R in Feet.	log (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log (A)
·51	9 18	·37972	I 5794652	·61621	·906018	I 9571630
·52	9 36	·38430	I 5846757	·61942	·928548	I 9678106
·53	9 54	·38874	I 5896637	·62349	·951012	I 9781952
·54	9 72	·39318	I 5945916	·62704	·973176	I 9883252
·55	9 90	·39732	I 5991501	·63034	·995865	I 9982086
·56	10 08	·40141	I 6035968	·63357	1 018224	0 0078539
·57	10 26	·40537	I 6078593	·63669	1 040511	0 0172061
·58	10 44	·40920	I 6119414	·63969	1 062792	0 0264519
·59	10 62	·41290	I 6158482	·64257	1 084368	0 0354196
·60	10 80	·41649	I 6196041	·64536	1 107072	0 0441723
·61	10·98	·41989	I 6231401	·64799	1 125068	0 0527176
·62	11 16	·42318	I 6265318	·65052	1 150356	0 0610596
·63	11 34	·42633	I 6297543	·65294	1 173636	0 0692027
·64	11 52	·42935	I 6328116	·65524	1 194408	0 0771518
·65	11·70	·43222	I 6357065	·65743	1 215936	0 0849123
·66	11 88	·43494	I 6384360	·65950	1 237320	0 0924860
·67	12 06	·43752	I 6410019	·66145	1 258560	0 0998770
·68	12 24	·43994	I 6433967	·66328	1 279656	0 1070901
·69	12 42	·44222	I 6456161	·66500	1 300536	0 1141263
·70	12 60	·44370	I 6477271	·66659	1 321272	0 1209907
·71	12 78	·44631	I 6496424	·66806	1 341792	0 1276837
·72	12 96	·44811	I 6513938	·66941	1 362096	0 1342092
·73	13 14	·44975	I 6529796	·67064	1 382184	0 1405687
·74	13 32	·45123	I 6543987	·67173	1 402056	0 1467645
·75	13 50	·45253	I 6556481	·67270	1 421676	0 1527979
·76	13 68	·45365	I 6567248	·67353	1 441008	0 1586697
·77	13 86	·45459	I 6576271	·67424	1 460088	0 1643815
·78	14 04	·45535	I 6583496	·67480	1 478880	0 1699355
·79	14 22	·45592	I 6588890	·67522	1 497384	0 1753306
·80	14 40	·45628	I 6592379	·67549	1 519128	0 1805652
·81	14 58	·45645	I 6593972	·67561	1 533384	0 1856471
·82	14 76	·45640	I 6593618	·67557	1 550844	0 1905675
·83	14 94	·45613	I 6590963	·67538	1 567836	0 1953292
·84	15 12	·45564	I 6586222	·67501	1 584612	0 1999316
·85	15 30	·45490	I 6579162	·67446	1 600920	0 2043714
·86	15 48	·45390	I 6569671	·67372	1 616760	0 2086486
·87	15 66	·45264	I 6557578	·67278	1 632132	0 2127595
·88	15 84	·45109	I 6542700	·67163	1 647036	0 2167013
·89	16 02	·44924	I 6524804	·67025	1 661364	0 2204615
·90	16 20	·44705	I 6503610	·66862	1 675188	0 2240607
·91	16 38	·44450	I 6478769	·66671	1 688364	0 2274673
·92	16 56	·44155	I 6449833	·66449	1 700328	0 2306830
·93	16 74	·43814	I 6416218	·66192	1 712772	0 2336984
·94	16 92	·43422	I 6377123	·65895	1 723810	0 2365014
·95	17 10	·42974	I 6332139	·65555	1 734084	0 2390774
·96	17 28	·42436	I 6277420	·65143	1 749444	0 2414057
·97	17 46	·41805	I 6212306	·64657	1 751688	0 2434690
·98	17 64	·41027	I 6130714	·64052	1 758708	0 2451943
·980	17 802	·40109	I 6032510	·63332	1 763676	0 2464238
·990	17 820	·39082	I 6018682	·63231	1 764144	0 2465368
·991	17 838	·39856	I 6004999	·63132	1 764576	0 2466443
·992	17 856	·39719	I 5990007	·63023	1 765008	0 2467456
·993	17 874	·39596	I 5976616	·62926	1 765404	0 2468413
·994	17 892	·39416	I 5956736	·62782	1 765764	0 2469290
·995	17 910	·39244	I 5937839	·62645	1 766088	0 2470118

TABLE XV.—PIPE TWENTY-ONE INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·021	·001161	3·0648789	·03405	·000129	$\bar{4}$·1093253
·002	·042	·002327	3·3668896	·04824	·000364	$\bar{4}$·5616230
·003	·063	·002777	3·4436697	·05270	·000671	$\bar{4}$·8265201
·004	·084	·004659	3·6683113	·06825	·001032	3·0137059
·005	·105	·005826	3·7653648	·07633	·001442	3·1590969
·006	·126	·006985	3·8441850	·08358	·001893	3·2770645
·007	·147	·008052	3·9058619	·08973	·002386	3·3776135
·008	·168	·009301	3·9685168	·09644	·002915	3·4647129
·009	·189	·010428	2·0192305	·10247	·003476	3·5410719
·010	·210	·011609	2·0648099	·10774	·004071	3·6096010
·011	·231	·012765	2·1060514	·11298	·004695	3·6716182
·02	·42	·023117	2·3639497	·15204	·011481	2·0499914
·03	·63	·034510	2·5379537	·18577	·021027	2·3227798
·04	·84	·045687	2·6597983	·21423	·032272	2·5088343
·05	1·05	·056907	2·7551658	·23855	·044960	2·6528316
·06	1·26	·068025	2·8326727	·26081	·058783	2·7692585
·07	1·47	·078976	2·8974966	·28167	·074014	2·8693167
·08	1·68	·089817	2·9533602	·29969	·090144	2·9549400
·09	1·89	·10054	1·0023621	·31708	·10724	1·0302929
·10	2·00	·11115	1·0459465	·33340	·12518	1·0975358
·11	2·21	·12166	1·0851590	·34880	·14395	1·1582293
·12	2·52	·13205	1·1207410	·36338	·16349	1·2134952
·13	2·72	·14232	1·1532872	·37726	·18374	1·2642200
·14	2·94	·15248	1·1832371	·39049	·20467	1·3110670
·15	3·15	·16253	1·2109509	·40315	·22624	1·3545734
·16	3·36	·17246	1·2367056	·41529	·24840	1·3951611
·17	3·57	·18228	1·2607474	·42694	·27114	1·4331959
·18	3·78	·19198	1·2832635	·43816	·29441	1·4689575
·19	3·99	·20156	1·3044189	·44896	·31819	1·5026915
·20	4·20	·21054	1·3233529	·45885	·34246	1·5346113
·21	4·41	·22038	1·3431780	·46944	·36718	1·5648881
·22	4·62	·22962	1·3610017	·47944	·39234	1·5936726
·23	4·83	·23872	1·3779034	·48860	·41696	1·6200974
·24	5·04	·24772	1·3939633	·49771	·44388	1·6472693
·25	5·25	·25659	1·4092460	·50655	·47024	1·6723428
·26	5·46	·26534	1·4238145	·51511	·49693	1·6962955
·27	5·67	·27398	1·4377216	·52342	·51275	1·7183006

TABLE XV —*continued*

Depth on In vert — by Diameter	Depth on In vert in Ins	Hydraulic Mean Depth R in Feet	log (R)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet	log (A)
51	10 71	44299	I 6409780	66558	1 23326	0 09105 4
52	10 92	44835	I 6516223	66959	1 26387	0 1017041
53	11 13	45353	I 6566006	67345	1 29145	0 1110887
54	11 34	45871	I 6615382	67728	1 32 08	0 1222187
55	11 55	46247	I 66 0869	68021	1 3 558	0 1321021
56	11 76	46831	I 670 433	68433	1 38 94	0 1417474
57	11 97	47293	I 6748057	68771	1 41631	0 1511596
58	12 18	47740	I 6788880	69094	1 44992	0 1603454
59	12 39	48189	I 6829 20	69418	1 47677	0 1693131
60	12 60	48589	I 6865407	69706	1 0683	0 17806 8
61	12 81	48987	I 6900869	69991	1 3677	0 1866111
62	13 02	49389	I 6936323	70277	1 566 9	0 1949531
63	13 23	49739	I 6967005	70 26	1 59623	0 2030062
64	13 44	50090	I 6997 84	70774	1 62571	0 21104 3
65	13 65	50426	I 7026613	71011	1 65503	0 2188058
66	13 86	50743	I 7053827	71234	1 68410	0 2263795
67	14 07	51044	I 707 485	71445	1 71 05	0 2337705
68	14 28	51326	I 7103432	71642	1 74174	0 2409836
69	14 49	51228	I 712 934	71828	1 77020	0 2480224
70	14 70	51841	I 7146737	72000	1 79839	0 2 48842
71	14 91	52070	I 7165891	72159	1 82632	0 261 772
72	15 12	52280	I 7183404	7230	1 84970	0 2671027
73	15 33	52471	I 7199262	72437	1 88131	0 2744622
74	15 54	52643	I 7213452	72	1 91274	0 2806 82
75	15 75	52795	I 722 198	726 0	1 93 04	0 2866014
76	15 96	52926	I 7230715	727 0	1 96183	0 292 632
77	16 17	53036	I 72 3027	72826	1 98735	0 3038290
78	16 38	53125	I 72 8388	72870	2 01293	0 3088976
79	16 59	53191	I 726179	72932	2 03606	0 3144613
80	16 80	53232	I 726 439	72960	2 06282	0 319 406
81	17 01	53252	I 726 439	72974	2 08708	0 319 406
82	17 22	53247	I 726298	73970	2 11086	0 3244610
83	17 43	53216	I 726 0430	73033	2 13403	0 3292141
84	17 64	53158	I 725 715	72903	2 1 689	0 3338271
85	17 85	53071	I 7248628	72850	2 17906	0 3382692
86	18 06	52957	I 7239137	72770	2 20060	0 342 421
87	18 27	52808	I 7227044	72669	2 22153	0 3466330
88	18 48	52627	I 7212167	72545	2 24178	0 3 05948
89	18 69	52411	I 7194261	72395	2 26132	0 3543630
90	18 90	52156	I 7173076	72219	2 28000	0 3587 42
91	19 11	51858	I 7148235	72013	2 2980	0 3613608
92	19 32	51514	I 7119293	71773	2 31513	0 3643765
93	19 53	51117	I 7085711	71496	2 33126	0 367 919
94	19 74	50659	I 7046590	71175	2 34630	0 3703949
95	19 95	50138	I 7001673	70808	2 36031	0 3729709
96	20 16	49503	I 6946885	70362	2 37300	0 3752392
97	20 37	48772	I 6881772	69837	2 38425	0 3773525
98	20 58	47864	I 6800180	69184	2 39379	0 3790878
980	20 769	46687	I 6891976	68328	2 400 3	0 3803173
990	20 790	46646	I 6688145	68297	2 40121	0 3804303
991	20 811	46499	I 6674 25	68190	2 40734	0 3804378
992	20 832	46339	I 66 9473	68072	2 40236	0 3806391
993	20 853	46197	I 6646158	67968	2 40284	0 3807248
994	20 874	45985	I 6626202	67812	2 40338	0 3808234
995	20 895	45785	I 6607305	67665	2 40383	0 3809053
996	20 916	45567	I 6586514	67503	2 40424	0 3809794
997	20 937	45318	I 6562772	67319	2 40461	0 3810447
998	20 958	45025	I 6534603	67101	2 40491	0 3811000
999	20 979	43734	I 6414162	66024	2 4051	0 3811425
1 000	21 000	43750	I 6409780	66143	2 40 27	0 38116 4

TABLE XVI.—PIPE TWENTY-FOUR INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·024	·001327	3·1228777	·03642	·000168	4·2253093
·002	·048	·002660	3·4248879	·05157	·000476	4·6776070
·003	·072	·003174	3·5016654	·05634	·000876	4·9425011
·004	·096	·005224	3·7263119	·07297	·001268	3·5445699
·005	·120	·006558	3·8233588	·08159	·001884	3·2750809
·006	·144	·007983	3·9021799	·08934	·002476	3·3937506
·007	·168	·009201	3·9638580	·09592	·003016	3·4935975
·008	·192	·010629	2·0265127	·10310	·003808	3·6806969
·009	·216	·011946	2·0772225	·10930	·004540	3·6570559
·010	·240	·013267	2·1227990	·11518	·005316	3·7255850
·011	·264	·014590	2·1640468	·12079	·006132	3·7876022
·02	·48	·026420	2·4219430	·16254	·014996	2·1759754
·03	·72	·039441	2·5959476	·19860	·027464	2·4387638
·04	·96	·052215	2·7177913	·22850	·042152	2·6248182
·05	1·20	·065036	2·8131586	·25502	·058724	2·7688156
·06	1·44	·077743	2·8906655	·27883	·076956	2·8862425
·07	1·68	·090258	2·9554891	·30043	·096672	2·9853007
·08	1·92	·10265	1·0113523	·32039	·117740	1·0709240
·09	2·16	·11491	1·0603547	·33898	·140048	1·1462769
·10	2·40	·12704	1·1039386	·35642	·163500	1·2135178
·11	2·64	·13904	1·1431514	·37288	·188024	1·2742133
·12	2·88	·15092	1·1787334	·38669	·213540	1·3294792
·13	3·12	·16266	1·2112793	·40331	·239996	1·3802040
·14	3·36	·17427	1·2412292	·41746	·267332	1·4270510
·15	3·60	·18575	1·2689430	·43100	·295500	1·4705575
·16	3·84	·16710	1·2946977	·44396	·324448	1·5111451
·17	4·08	·20832	1·3187426	·45642	·354144	1·5491799
·18	4·32	·21941	1·3412594	·46841	·384540	1·5849415
·19	4·56	·23036	1·3624135	·47996	·415600	1·6186755
·20	4·80	·24118	1·3823474	·49110	·447296	1·6505950
·21	5·04	·25187	1·4011745	·50186	·479592	1·6808721
·22	5·28	·26242	1·4189945	·51227	·512456	1·7096566
·23	5·52	·27283	1·4358956	·52223	·545860	1·7370813
·24	5·76	·28311	1·4519569	·53208	·577780	1·7632633
·25	6·00	·29325	1·4672398	·54152	·614284	1·7882985
·26	6·24	·30325	1·4818086	·55069	·649052	1·8122795
·27	6·48	·31212	1·4957136	·55957	·684360	1·8352846
·28	6·72	·32284	1·5089991	·56819	·720080	1·8573801
·29	6·96	·33243	1·5217079	·57657	·756192	1·8786321
·30	7·20	·34188	1·5338759	·58470	·792672	1·8990935
·31	7·44	·35119	1·5455425	·59261	·829504	1·9188185
·32	7·68	·36035	1·5567258	·60029	·866664	1·9378508
·33	7·72	·36937	1·5674650	·60776	·906536	1·9562338
·34	8·16	·37825	1·5777776	·61502	·941892	1·9740011
·35	8·40	·38699	1·5876915	·62208	·979920	1·9911906
·36	8·64	·39557	1·5972271	·62894	1·018204	0·0078348
·37	8·88	·40401	1·6063959	·63562	1·056716	0·0239583
·38	9·12	·41231	1·6152215	·64211	1·095444	0·0395902
·39	9·36	·42045	1·6237195	·64842	1·034372	0·0547555
·40	9·60	·42846	1·6319130	·65457	1·173480	0·0837705
·41	9·84	·43630	1·6397853	·66053	1·212748	0·0837705
·42	10·08	·44400	1·6473813	·66633	1·252168	0·0976626
·43	10·32	·45154	1·6546983	·67197	1·291712	0·1111657
·44	10·56	·45893	1·6617503	·67744	1·331372	0·1242994
·45	10·30	·46617	1·6685465	·68276	1·371132	0·1370793
·46	11·04	·47316	1·6750124	·68787	1·410968	0·1495172
·47	11·28	·48021	1·6814362	·69297	1·450868	0·1616279
·48	11·52	·48694	1·6874799	·69781	1·490816	0·1734240
·49	11·76	·49355	1·6933340	·70253	1·530800	0·1849185
·50	12·00	·50000	1·6989700	·70711	1·570797	0·1961199

TABLE XVI.—*continued*

Depth in feet = y	Depth in Metres = y	Hydraulic Mean Depth = R in Feet.	$\frac{1}{n}$ (B)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	$\frac{1}{n}\sqrt{R}$ (A)
1	1·24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	1·48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	1·72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	1·96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	11·20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	13·44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	13·68	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	13·92	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	14·16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	14·44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
61	14·64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
62	14·88	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	15·12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
64	15·36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
65	15·60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
66	15·84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
67	16·08	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
68	16·32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
69	16·56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
70	16·80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
71	17·04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
72	17·28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
73	17·52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
74	17·76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
75	18·00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
76	18·24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
77	18·48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
78	18·72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
79	18·96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	19·20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
81	19·44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
82	19·68	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
83	19·92	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
84	20·16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
85	20·40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
86	20·64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
87	20·88	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
88	21·12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
89	21·36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
90	21·60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
91	21·84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
92	22·08	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
93	22·32	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
94	22·56	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
95	22·80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
96	23·04	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
97	23·28	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
98	23·52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
99	23·76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	24·00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
101	24·24	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
102	24·48	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
103	24·72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
104	24·96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
105	25·20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
106	25·44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
107	25·68	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
108	25·92	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
109	26·16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	240·00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TABLES FOR THE SOLUTION OF

TABLE XVII.—PIPE TWENTY-SEVEN INCHES IN DIAMETER.

Hydraulic Gradient 1 in	Velocity in Feet per Second	Hydraulic Mean Depth R in Feet	log (R)	$\sqrt{R}$ in Feet	Area of Cross Section in Square Feet	log (A)
·001	·027	·001493	$\bar{3}$·1740234	·03863	·000213	$\bar{4}$·3276143
·002	·054	·002993	$\bar{3}$·4760341	·05470	·000563	$\bar{4}$·7509129
·003	·081	·003572	$\bar{3}$·5528142	·05975	·001114	$\bar{3}$·0448091
·004	·108	·005991	$\bar{3}$·7774558	·07739	·001706	$\bar{3}$·2319949
·005	·135	·007491	$\bar{3}$·8745092	·08657	·002385	$\bar{3}$·3778859
·006	·162	·008982	$\bar{3}$·9533295	·09476	·003128	$\bar{3}$·4953535
·007	·189	·010351	$\bar{2}$·0156064	·10174	·003944	$\bar{3}$·5959025
·008	·216	·011958	$\bar{2}$·0776613	·10960	·004819	$\bar{3}$·6830019
·009	·243	·013439	$\bar{2}$·1283750	·11592	·005746	$\bar{3}$·7593609
·010	·270	·014926	$\bar{2}$·1739514	·12245	·006728	$\bar{3}$·8278990
·011	·297	·016413	$\bar{2}$·2151959	·12864	·007761	$\bar{3}$·8899072
·02	·54	·029723	$\bar{2}$·4730952	·17240	·018979	$\bar{2}$·2782804
·03	·81	·044370	$\bar{2}$·6470982	·21064	·034759	$\bar{2}$·5410688
·04	1·08	·058741	$\bar{2}$·7689428	·24236	·053348	$\bar{2}$·7271233
·05	1·35	·073166	$\bar{2}$·8643103	·27049	·074151	$\bar{2}$·8701206
·06	1·62	·087461	$\bar{2}$·9418172	·29573	·097173	$\bar{2}$·9875475
·07	1·89	·10154	$\bar{1}$·0066411	·31865	·12235	$\bar{1}$·0876057
·08	2·16	·11547	$\bar{1}$·0625047	·33982	·14901	$\bar{1}$·1732290
·09	2·43	·12927	$\bar{1}$·1115066	·35954	·17724	$\bar{1}$·2485819
·10	2·70	·14291	$\bar{1}$·1550910	·37804	·20692	$\bar{1}$·3158228
·11	2·97	·15642	$\bar{1}$·1943035	·39550	·23795	$\bar{1}$·3765183
·12	3·24	·16977	$\bar{1}$·2298855	·41204	·27088	$\bar{1}$·4317842
·13	3·51	·18299	$\bar{1}$·2624317	·42777	·30374	$\bar{1}$·4825090
·14	3·78	·19601	$\bar{1}$·2923816	·44278	·34622	$\bar{1}$·5393560
·15	4·05	·20897	$\bar{1}$·3200954	·45713	·37399	$\bar{1}$·5728625
·16	4·32	·22174	$\bar{1}$·3458501	·47089	·41062	$\bar{1}$·6134501
·17	4·59	·23436	$\bar{1}$·3698919	·48411	·44821	$\bar{1}$·6514849
·18	4·86	·24683	$\bar{1}$·3924080	·49682	·48368	$\bar{1}$·6872465
·19	5·13	·25915	$\bar{1}$·4135634	·50907	·52599	$\bar{1}$·7209805
·20	5·40	·27070	$\bar{1}$·4324974	·52029	·56597	$\bar{1}$·7528003
·21	5·67	·28334	$\bar{1}$·4523225	·53230	·60698	$\bar{1}$·7831771
·22	5·94	·29522	$\bar{1}$·4701462	·54334	·64857	$\bar{1}$·8119616
·23	6·21	·30693	$\bar{1}$·4870479	·55401	·68924	$\bar{1}$·8383764
·24	6·48	·31849	$\bar{1}$·5031078	·56435	·73376	$\bar{1}$·8655583
·25	6·75	·32990	$\bar{1}$·5183905	·57437	·77737	$\bar{1}$·8906318
·26	7·02	·34116	$\bar{1}$·5329590	·58408	·82145	$\bar{1}$·9145845
·27	7·29	·35307	$\bar{1}$·5468661	·59351	·86415	$\bar{1}$·9365895
·28	7·56	·36320	$\bar{1}$·5601505	·60266	·91135	$\bar{1}$·9596858
·29	7·83	·37398	$\bar{1}$·5728501	·61013	·95705	$\bar{1}$·9809371
·30	8·10	·38461	$\bar{1}$·5850275	·62017	1·00322	0·0013985
·31	8·37	·39599	$\bar{1}$·5976949	·62927	1·04984	0·0211235
·32	8·64	·40539	$\bar{1}$·6078806	·63670	1·09687	0 0401558
·33	8·91	·41554	$\bar{1}$·6186173	·64462	1·14429	0·0585388
·34	9·18	·42552	$\bar{1}$·6289298	·65232	1·19208	0·0763062
·35	9·45	·43539	$\bar{1}$·6388439	·65981	1·23735	0·0924956
·36	9·72	·44502	$\bar{1}$·6483796	·66709	1·28866	0·1101398
·37	9·99	·45451	$\bar{1}$·6575483	·67417	1·33740	0·1262633
·38	10·26	·46384	$\bar{1}$·6663740	·68106	1·38964	0 1429032
·39	10·53	·47301	$\bar{1}$·6748719	·68775	1·43568	0·1570605
·40	10·80	·48201	$\bar{1}$·6830648	·69427	1·48518	0·1717807
·41	11·07	·49083	$\bar{1}$·6909377	·70059	1·53488	0·1860756
·42	11·34	·49949	$\bar{1}$·6985337	·70675	1·58842	0·1999676
·43	11·61	·50798	$\bar{1}$·7058507	·71273	1·63482	0·2134707
·44	11·88	·51630	$\bar{1}$·7129028	·71854	1·68501	0·2266014
·45	12·15	·52444	$\bar{1}$·7196988	·72418	1·73134	0·2383843
·46	12·42	·53230	$\bar{1}$·7261637	·72959	1·78575	0·2518222
·47	12·69	·54273	$\bar{1}$·7345886	·73670	1·84473	0·2639329
·48	12·96	·54781	$\bar{1}$·7386323	·74014	1·88681	0·2757290
·49	13·23	·55524	$\bar{1}$·7444863	74514	1·93741	0·2872235
·50	13·50	·56250	$\bar{1}$·7501225	·74999	1 98803	0·2974218

TABLE XVII —*continued*

Depth on Inv — 1 y Diameter	Depth on Inv in Ins	Hydraulic Mean Depth R in Feet	log (R)	√R in Feet	Area of Cross Section in Square Feet	log (A)
51	13 77	56558	Ī 7555563	75470	2 03865	0 3093444
52	14 04	57645	Ī 7607668	75524	2 08926	0 3199931
53	14 31	58311	1 7657041	76361	2 13490	0 3293777
54	14 58	58977	Ī 7706827	76706	2 19032	0 3405077
55	14 85	59460	Ī 7742313	77110	2 24071	0 3503862
56	15 12	60226	Ī 7797878	77605	2 29105	0 3600364
57	15 39	60806	Ī 7839504	77974	2 34125	0 3694486
58	15 66	61380	Ī 7880325	78345	2 39130	0 3786344
59	15 93	61957	Ī 7920965	78713	2 44050	0 3873021
60	16 20	62500	Ī 7956852	79039	2 49089	0 3963548
61	16 47	62984	Ī 7992314	79362	2 54038	0 4049001
62	16 74	63500	1 8027768	79687	2 58965	0 4132421
63	17 01	63950	1 8058450	79969	2 62050	0 4183852
64	17 28	64402	Ī 8089029	80251	2 68741	0 4293348
65	17 55	64834	1 8118058	80519	2 73586	0 4370948
66	17 82	65241	Ī 8145272	80772	2 78399	0 4446685
67	18 09	65628	1 8170930	81011	2 83178	0 4520560
68	18 36	65991	1 8194877	81235	2 87920	0 4592726
69	18 63	66335	Ī 8217431	81446	2 92623	0 4663094
70	18 90	66652	Ī 8238182	81641	2 97285	0 4731732
71	19 17	66947	Ī 8257336	81821	3 01902	0 4798662
72	19 44	67217	Ī 8274849	81986	3 06768	0 4853917
73	19 71	67463	Ī 8290707	82136	3 10393	0 4927512
74	19 98	67684	Ī 8304897	82270	3 15462	0 4989472
75	20 25	67880	Ī 8317433	82389	3 19875	0 5049804
76	20 52	68048	Ī 8328160	82491	3 24229	0 5108522
77	20 79	68189	Ī 8337183	82577	3 28522	0 5165649
78	21 06	68304	Ī 8344472	82646	3 32749	0 5221180
79	21 33	68388	Ī 8349833	82697	3 36676	0 5271866
80	21 60	68443	Ī 8353290	82730	3 40396	0 5327503
81	21 87	68461	Ī 8354884	82745	3 45008	0 5378296
82	22 14	68460	Ī 8354430	82741	3 48939	0 5427500
83	22 41	68420	Ī 8351875	82716	3 52786	0 5475117
84	22 68	68346	Ī 8347160	82671	3 56544	0 5521141
85	22 95	68235	1 8340073	82604	3 60210	0 5565062
86	23 22	68086	Ī 8330582	82514	3 63773	0 5608311
87	23 49	67896	Ī 8318489	82339	3 67233	0 5649420
88	23 76	67664	Ī 8303612	82258	3 70581	0 5688838
89	24 03	67386	1 8285706	82083	3 73810	0 5726520
90	24 30	67058	Ī 8264521	82889	3 76914	0 5762432
91	24 57	66675	Ī 8239680	81650	3 79882	0 5796498
92	24 84	66233	Ī 8210744	81383	3 82706	0 5828650
93	25 11	65731	Ī 8177156	81069	3 85372	0 5858809
94	25 38	65163	Ī 8138035	80700	3 87867	0 5886839
95	25 65	64463	Ī 8093118	80288	3 90175	0 5912599
96	25 92	63640	Ī 8037330	79774	3 83343	0 5835882
97	26 19	62707	Ī 7973217	79188	3 94131	0 5956415
98	26 46	61640	Ī 7891625	78447	3 95709	0 5973765
989	26 703	60026	Ī 7783421	77476	3 96831	0 5986063
990	26 730	59973	1 7779500	77442	3 96934	0 5987193
991	26 757	59785	Ī 7765970	77321	3 97031	0 5988201
992	26 784	59578	Ī 7750918	77187	3 97125	0 5989281
993	26 811	59336	Ī 7733702	77069	3 97213	0 5990238
994	26 838	59124	Ī 7717647	76892	3 97294	0 5991124
995	26 865	58867	Ī 7698750	76725	3 97369	0 5991943
996	26 892	58586	Ī 7677959	76541	3 97436	0 5992674
997	26 919	58266	Ī 7654217	76332	3 97495	0 5993337
998	26 946	57890	Ī 7626048	76085	3 97547	0 5993890
999	26 973	56306	Ī 7500607	75037	3 97586	0 5994315
1 000	27 000	56250	Ī 7501225	74939	3 97607	0 5994544

TABLE XVIII.—PIPE THIRTY INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·030	·001658	$\bar{3}$·2197809	·04073	·000263	$\bar{4}$·4191293
·002	·060	·002647	$\bar{3}$·4217916	·05133	·000744	$\bar{4}$·8714270
·003	090	·003968	$\bar{3}$·5985717	·06299	·001368	$\bar{3}$·1363245
·004	·120	·006656	$\bar{3}$·8232133	·08158	·002106	$\bar{3}$·3235099
·005	·150	·008323	$\bar{3}$·9202868	·09123	·003706	$\bar{3}$·4689009
·006	·180	·009979	$\bar{3}$·9990870	·09984	·003863	$\bar{3}$·5868685
·007	·210	·011501	2·0607639	·10749	·004869	$\bar{3}$·6874175
·008	·240	·013286	2·1234188	·11526	·005949	$\bar{3}$·7745169
·009	·270	·014932	2·1741325	·12219	·007094	$\bar{3}$·8508759
·010	·300	·016584	2·2196989	·12878	·008306	$\bar{3}$·9194050
·011	·030	·018279	2·2609534	·13504	·009582	$\bar{3}$·9814222
·02	·060	·033025	2·5188527	·18172	·023431	2·3697954
·03	·090	·049301	2·6928557	·22203	·042715	2·6325838
·04	1·20	·065268	2·8147003	·25547	·065862	2·8186383
·05	1·50	·081295	2·9100678	·28186	·091756	2·9626356
·06	1·80	·097179	2·9875747	·31173	·11996	2·0790625
·07	2·10	·11282	1·0523957	·33589	·15105	1·1791207
·08	2·40	·12831	1·1082622	·35820	·18439	1·2647440
·09	2·70	·14363	1·1572641	·37899	·21882	1·3400969
·10	3·00	·15879	1·2008485	·39849	·25546	1·4073378
·11	3·30	·17380	1·2400610	·41689	·29378	1·4680333
·12	3·60	·18864	1·2756430	·43433	·33365	1·5232992
·13	3·90	·20332	1·3081892	·45091	·37499	1·5740240
·14	4·20	·21784	1·3381391	·46673	·41770	1·6208710
·15	4·50	·23219	1·3658529	·48186	·46171	1·6643775
·16	4·80	·24638	1·3916076	·49636	·50695	1·7049651
·17	5·10	·26040	1·4156494	·51029	·55335	1·7429999
·18	5·40	·27426	1·4381655	·52370	·60084	1·7787615
·19	5·70	·28795	1·4593209	·53661	·64937	1·8124955
·20	6·00	·30078	1·4782549	·54843	·69890	1·8444153
·21	6·30	·31483	1·4980800	·56109	·74936	1·8746921
·22	6·60	·32802	1·5159037	·57273	·80071	1·9034766
·23	6·90	·34104	1·5328054	·58401	·85092	1·9298914
·24	7·20	·36213	1·5588053	·60177	·90588	1·9570733
·25	7·50	·3 5656	1·5641480	·60544	·95972	1·9821468
·26	7·80	·37906	1·5787165	·61568	1·01414	0·0060995
·27	8·10	·39140	1·5926236	·62550	1·06682	0·0281045
·28	8·40	·40355	1·6059080	·63526	1·12512	0·0512008
·29	8·70	·41553	1·6186076	·64462	1·18155	0·0721521
·30	9·00	·42735	1·6307850	·65372	1·23855	0·0929135
·31	9·30	·43999	1·6434524	·66332	1·29610	0·1126385
·32	9·60	·45044	1·6536381	·67114	1·35416	0·1316708
·33	9·90	·46171	1·6643748	·67949	1·41890	0·1509538
·34	10·20	·47281	1·6746873	·68761	1·47170	0·1678212
·35	10·50	·48372	1·6846014	·69550	1·52760	0·1840106
·36	10·80	·49446	1·6941371	·70318	1·59094	0·2016548
·37	11·10	·50501	1·7033058	·71064	1·68957	0·2277783
·38	11·40	·51538	1·7121315	·71790	1·71166	0·2334182
·39	11·70	·52556	1·7206294	·72496	1·77245	0·2485755
·40	12·00	·53557	1·7288223	·73183	1·83359	0·2632957
·41	12·30	·54537	1·7366952	·73849	1·89191	0·2775906
·42	12·60	·55499	1·7442912	·74498	1·95651	0·2911826
·43	12·90	·56442	1·7516082	·75128	2·02295	0·3049857
·44	13·20	·57366	1·7586603	·75740	2·08026	0·3181191
·45	13·50	·58271	1·7654563	·76335	2·14239	0·3298993
·46	13·80	·59145	1·7719212	·76906	2·20463	0·3433372
·47	14·10	·60026	1·7783161	·77477	2·26698	0·3551479
·48	14·40	·60868	1·7843898	·78019	2·32939	0·3672410
·49	14·70	·61694	1·7902138	·78545	2·39187	0·3787385
·50	15·00	·62500	1·7958800	·79056	2·45436	0·3899398

TABLE XVIII —*continued*

Depth in terms of Diameter	Depth in Feet and Ins	Hydraulic Mean Depth Rm Feet	log$_{10}$ (R)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log$_{10}$ A)
51	15 30	63286	I 8013138	795 3	2 3324	0 4008534
52	15 60	640 0	I 8065213	80031	2 7933	0 4115081
53	15 90	64730	I 8115116	80432	2 63 68	0 4208927
54	16 20	6 530	I 8164402	809 0	2 70410	0 4320227
55	16 50	66067	I 8193888	81282	2 76631	0 4419012
56	16 80	66902	I 8254483	81794	2 82846	0 4513514
57	17 10	67 62	I 8237079	82196	2 83043	0 4609636
58	17 40	68200	I 8337900	82 63	2 9 222	0 4701494
59	17 70	68842	I 8378540	82971	3 01381	0 4791171
60	18 00	6 3413	I 8414427	83314	3 07517	0 4878638
61	18 30	69982	I 8443883	8365	3 13628	0 4964151
62	18 60	70 56	I 8486343	83337	3 19710	0 5047371
63	18 90	710 6	I 8516025	84204	3 25761	0 5129002
64	19 20	71558	I 8546604	84592	3 31779	0 5208493
65	19 50	72038	I 8576633	84875	3 37761	0 5286038
66	19 80	72491	I 8602847	85141	3 43703	0 5361835
67	20 10	72920	I 8628805	85333	3 49602	0 5435745
68	20 40	73323	I 8652462	85623	3 55457	0 5507876
69	20 70	73705	I 8675014	858 2	3 61263	0 5578244
70	21 00	74058	I 8695757	86057	3 67018	0 5646882
71	21 30	74385	I 8714911	86247	3 72718	0 5713812
72	21 60	74686	I 8732424	86421	3 77431	0 5760067
73	21 90	74959	I 8748282	86579	3 83342	0 5842662
74	22 20	7 205	I 8762472	86720	3 89459	0 5901622
75	22 50	75422	I 8776008	86846	3 94907	0 5964954
76	22 80	7 609	I 8787735	86953	4 00283	0 6023672
77	23 10	7 766	I 8794758	87043	4 05584	0 6080799
78	23 40	7 893	I 8802047	87116	4 10802	0 6136330
79	23 70	7 987	I 8807408	87170	4 15962	0 6187016
80	24 00	76047	I 8810860	87205	4 20383	0 6242653
81	24 30	76075	I 8812459	87221	4 23936	0 6293446
82	24 60	76067	I 8812005	87216	4 23799	0 6332650
83	24 90	76023	I 8809450	87191	4 35018	0 6430267
84	25 20	7 940	I 8804736	87143	4 40178	0 6436291
85	25 50	7 816	I 8797648	87072	4 44704	0 6480712
86	25 80	7 661	I 8788157	87377	4 49103	0 6523461
87	26 10	75440	I 8776064	86856	4 53374	0 6564570
88	26 40	7 182	I 8761167	86708	4 57508	0 6603958
89	26 70	74873	I 8743281	86529	4 61495	0 6641670
90	27 00	74 03	I 8722036	86318	4 65327	0 6677 82
91	27 30	74084	I 8697255	86072	4 68991	0 6711648
92	27 60	73 32	I 8668313	85785	4 72476	0 6743503
93	27 90	73025	I 8634731	85454	4 75768	0 6773353
94	28 20	72370	I 8596610	85070	4 78843	0 6801983
95	28 50	71625	I 8550633	84632	4 81638	0 6827743
96	28 80	70727	I 8493305	84049	4 84287	0 6851032
97	29 10	69675	I 8430192	83421	4 86582	0 6871 65
98	29 40	68378	I 8349200	82631	4 88530	0 6888318
99	29 670	6663	I 8240336	81667	4 89915	0 6901213
100	29 700	66637	I 8237165	81631	4 90043	0 6902343
101	29 730	66428	I 8223543	81493	4 90112	0 6903401
102	29 760	66198	I 8208433	81362	4 90278	0 6904131
103	29 730	66011	I 8196178	81247	4 90386	0 6904859
104	29 820	65 33	I 8173222	81051	4 90486	0 6906274
105	29 850	65408	I 8156324	80875	4 90579	0 6907091
106	29 880	65035	I 8133534	80682	4 90663	0 6907834
107	29 910	64740	I 8111732	80461	4 90736	0 6908487
108	29 940	64322	I 8085623	80201	4 90799	0 6909040
109	29 970	62 63	I 7963182	79016	4 90847	0 6909465
1000	30 000	62500	I 7935880	79076	4 90873	0 6909734

TABLE XIX.—PIPE THIRTY-THREE INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·033	·001825	$\bar{3}$·2611736	·04271	·000317	$\bar{4}$·5019147
·002	·066	·003657	$\bar{3}$·5631843	·06047	·000899	$\bar{4}$·9542124
003	·099	·004365	$\bar{3}$·6399644	·06606	·001656	$\bar{3}$·2191095
·004	·132	·007322	$\bar{3}$·8646060	·08556	·002518	$\bar{3}$·4062953
·005	·165	·009155	$\bar{3}$·9616595	·09568	·003562	$\bar{3}$·5516863
·006	·198	·010976	$\bar{2}$·0404797	·10477	·004674	$\bar{3}$·6696539
·007	·231	·012651	$\bar{2}$·1021566	·11248	·004679	$\bar{3}$·6702029
·008	·264	·014615	$\bar{2}$·1648115	·12089	·007199	$\bar{3}$·8573023
·009	·297	·016425	$\bar{2}$·2155252	·12816	·008584	$\bar{3}$·9336613
·010	·330	·018243	$\bar{2}$·2611016	·13506	·010051	$\bar{2}$·0021904
·011	·363	·020060	$\bar{2}$·3023461	·14163	·011593	$\bar{2}$·0642076
·02	·66	·036328	$\bar{2}$·5602454	·19059	·028351	$\bar{2}$·4525808
·03	·99	·054231	$\bar{2}$·7342484	·23287	·051924	$\bar{2}$·7153692
·04	1·32	·071794	$\bar{2}$·8560930	·26791	·079693	$\bar{2}$·9014237
·05	1·65	·089425	$\bar{2}$·9514605	·29904	·11102	$\bar{1}$·0454210
·06	1·98	·10689	$\bar{1}$·0289671	·32695	·14509	$\bar{1}$·1618479
·07	2·31	·12410	$\bar{1}$·0937913	·35228	·18277	$\bar{1}$·2619061
·08	2·64	·14114	$\bar{1}$·1496549	·37568	·22260	$\bar{1}$·3475291
·09	2·97	·15799	$\bar{1}$·1986568	·39749	·26477	$\bar{1}$·4228823
·10	3·30	·17467	$\bar{1}$·2422412	·41794	·30911	$\bar{1}$·4901232
·11	3·63	·19118	$\bar{1}$·2814537	·43724	·35548	$\bar{1}$·5508187
·12	3·96	·20750	$\bar{1}$·3170357	·45553	·40372	$\bar{1}$·6060846
·13	4·29	·22365	$\bar{1}$·3495819	·47292	·45374	$\bar{1}$·6568094
·14	4·62	·23962	$\bar{1}$·3795318	·48951	·50542	$\bar{1}$·7036564
·15	4·95	·25541	$\bar{1}$·4072456	·50538	·55867	$\bar{1}$·7471629
·16	5·28	·27101	$\bar{1}$·4330003	·52059	·61340	$\bar{1}$·7877505
·17	5·61	·28644	$\bar{1}$·4570421	·53520	·66955	$\bar{1}$·8257853
·18	5·94	·30168	$\bar{1}$·4795582	·51926	·72702	$\bar{1}$·8615469
·19	6·27	·31674	$\bar{1}$·5007136	·56280	·78571	$\bar{1}$·8952809
·20	6·60	·33086	$\bar{1}$·5196476	·57520	·84566	$\bar{1}$·9272097
·21	6·93	·34631	$\bar{1}$·5394727	·58848	·90672	$\bar{1}$·9574775
·22	7·26	·36082	$\bar{1}$·5572964	·60068	·96886	$\bar{1}$·9862620
·23	7·59	·37428	$\bar{1}$·5711981	·61219	1·02961	0·0126768
·24	7·92	·38927	$\bar{1}$·5902580	·62392	1·09612	0·0398587
·25	8·25	·40321	$\bar{1}$·6055407	·63499	1·16126	0·0649322
·26	8·58	·41697	[illegible]	·64573	1·22711	0·0888849
[illegible]	[illegible]	[illegible]		·65615	1·29089	0·1108899

TABLE XIX —*continued*

Depth in Part — by Diameter	Depth in Part in Ins	Hydraulic Mean Depth R in Feet	log$_e$ (R)	$\sqrt{R}$ in Feet	Area of Cross Section in Square Feet	log (A)
51	16 83	69615	I 8427065	83435	3 04540	0 4836448
52	17 16	70455	I 8479170	83937	3 12099	0 4942035
53	17 49	71263	I 8529043	84421	3 18917	0 5036781
54	17 82	72066	I 8578329	84901	3 27196	0 51480S1
55	18 15	72674	I 8613815	85249	3 34723	0 5246866
56	18 48	73593	I 8668380	85786	3 42244	0 5343368
57	18 81	74319	I 8711006	86208	3 49742	0 5437490
58	19 14	75020	I 8751827	86614	3 57219	0 5529345
59	19 47	75726	I 8792467	87020	3 64672	0 5619025
60	19 80	76354	I 8828354	87381	3 72096	0 5707552
61	20 13	76980	I 8863816	87738	3 79490	0 5792005
62	20 46	77611	I 8899270	88097	3 86849	0 5875425
63	20 79	78161	I 8929052	88403	3 94171	0 5956856
64	21 12	78714	I 8960531	88721	4 01453	0 6036347
65	21 45	79242	I 8989560	88018	4 08691	0 6113952
66	21 78	79740	I 9016774	89297	4 15880	0 6189689
67	22 11	80212	I 9042432	89561	4 23019	0 6263599
68	22 44	80656	I 9066379	89808	4 30103	0 6335730
69	22 77	81076	I 9088941	90042	4 37129	0 6406098
70	23 10	81464	I 9109654	90257	4 44092	0 6474736
71	23 43	81824	I 9128838	90456	4 50989	0 6541666
72	23 76	82155	I 9146301	90639	4 56764	0 6596921
73	24 09	82455	I 9162209	90805	4 64570	0 6670516
74	24 42	82725	I 9176319	90953	4 71246	0 6732476
75	24 75	82964	I 9188935	91084	4 77838	0 6792808
76	25 08	83169	I 9199662	91197	4 84332	0 6851526
77	25 41	83342	I 9208685	91292	4 90755	0 6908653
78	25 74	83482	I 9215974	91368	4 97070	0 6964184
79	26 07	83586	I 9221335	91423	5 02906	0 7014870
80	26 40	83652	I 9224792	91461	5 09390	0 7070507
81	26 73	83683	I 9226386	91478	5 15382	0 7121300
82	27 06	83674	I 9225932	91473	5 21255	0 7170504
83	27 39	83625	I 9223377	91446	5 27001	0 7218121
84	27 72	83534	I 9218662	91397	5 32616	0 7264145
85	28 05	83398	I 9211575	91301	5 38092	0 7305566
86	28 38	83216	I 9202084	91222	5 43414	0 7341315
87	28 71	82984	I 9189991	91096	5 48570	0 7392424
88	29 04	82701	I 9175114	90940	5 53554	0 7431842
89	29 37	82360	I 9157208	90752	5 58409	0 7465524
90	29 70	81960	I 9136023	90506	5 63043	0 7505436
91	30 03	81492	I 9111182	90273	5 67479	0 7539502
92	30 36	80951	I 9082246	90972	5 71637	0 7571659
93	30 69	80327	I 9045659	89625	5 75680	0 7601813
94	31 02	79607	I 9009537	89223	5 79407	0 7629843
95	31 35	78788	I 8964620	88762	5 82804	0 7655603
96	31 68	77800	I 8909832	88204	5 85987	0 7678886
97	32 01	76642	I 8844719	87544	5 88763	0 7699419
98	32 34	75216	I 8763127	86727	5 91122	0 7716772
989	32 571	73365	I 8654923	85653	5 92798	0 7729067
990	32 670	73300	I 8651032	85615	5 92952	0 7730197
991	32 703	73071	I 8637472	85481	5 93096	0 7731255
992	32 736	72818	I 8622420	85333	5 93237	0 7732286
993	32 769	72596	I 8609105	85203	5 93367	0 7733242
994	32 802	72262	I 8589149	85007	5 93489	0 7734128
995	32 835	71949	I 8570252	84822	5 93601	0 7734947
996	32 868	71605	I 8549461	84620	5 93702	0 7735688
997	32 901	71215	I 8525719	84388	5 93791	0 7736341
998	32 934	70754	I 8497150	84115	5 93867	0 7736894
999	32 967	68819	I 8377103	82957	5 93925	0 7737319
1 000	33 000	68750	I 8372727	82915	5 93956	0 7737518

TABLE XX.—PIPE THIRTY-SIX INCHES IN DIAMETER.

Depth on Invert ÷ by Diameter.	Depth on Invert in Ins.	Hydraulic Mean Depth. R in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	Area of Cross Section in Square Feet.	log. (A.)
·001	·036	·001990	3·2989690	·04461	·000378	4·5771918
·002	·072	·003990	3·6009792	·06316	·001071	3·0297895
·003	·108	·004761	3·6777567	·06900	·001971	3·2946836
·004	·144	·007987	3·9024032	·08937	·003033	3·4818724
·005	·180	·009987	3·9994501	·09993	·004339	3·6272634
·006	·216	·011811	2·0782712	·10910	·005571	3·7459331
·007	·252	·013802	2·1399493	·11748	·007011	3·8457800
·008	·288	·016018	2·2026010	·12627	·008568	3·9328791
·009	·324	·017919	2·2533138	·13386	·010115	2·0092384
·010	·360	·019902	2·2988903	·14107	·011961	2·0777675
·011	·396	·021884	2·3401381	·14793	·013797	2·1397847
·02	·72	·039631	2·5980343	·19907	·033741	2·5281579
·03	1·08	·059161	2·7720389	·24323	·061794	2·7909163
·04	1·44	·078322	2·8938826	·27986	·094842	2·9770007
·05	1·80	·097555	2·9892499	·31234	·132129	1·1209981
·06	2·16	·11661	1·0667568	·34149	·173151	1·2384250
·07	2·52	·13539	1·1315804	·36795	·217512	1·3374832
·08	2·88	·15397	1·1874436	·39239	·264915	1·4231065
·09	3·24	·17236	1·2364460	·41517	·315108	1·4984594
·10	3·60	·19056	1·2800299	·43653	·367875	1·5657603
·11	3·96	·20856	1·3192427	·45674	·423054	1·6263958
·12	4·32	·22637	1·3548247	·47578	·480465	1·6816617
·13	4·68	·24399	1·3874706	·49395	·539991	1·7323865
·14	5·04	·26141	1·4173205	·51128	·601497	1·7792335
·15	5·40	·27863	1·4450343	·52786	·664875	1·8227100
·16	5·76	·29565	1·4707890	·54373	·730008	1·8633276
·17	6·12	·31249	1·4948339	·55900	·796824	1·9013624
·18	6·48	·32912	1·5173507	·57369	·865115	1·9371240
·19	6·84	·34555	1·5385048	·58783	·935100	1·9708580
·20	7·20	·36177	1·5584387	·60147	1·006416	0·0027775
·21	7·56	·37780	1·5772658	·61466	1·079082	0·0330516
·22	7·96	·39453	1·5950858	·62710	1·153026	0·0618391
·23	8·28	·40925	1·6119869	·63973	1·228185	0·0892638
·24	8·64	·42166	1·6280482	·65166	1·304505	0·1154458
·25	9·00	·43988	1·6433311	·66323	1·381914	0·1404810
·26	9·36	·45488	1·6578999	·67445	1·460367	0·1644620
·27	9·72	·46968	1·6718049	·68533	1·539810	0·1874671
·28	10·08	·48127	1·6850901	·69590	1·620180	0·2095655
·29	10·44	·49865	1·6977992	·70615	1·701432	0·2308146
·30	10·80	·51284	1·7099872	·71613	1·783512	0·2512760
·31	11·16	·52678	1·7216338	·72580	1·866384	0·2710010
·32	11·52	·54052	1·7328171	·73520	1·949994	0·2900333
·33	11·88	·55406	1·7435563	·74435	2·034306	0·3084163
·34	12·24	·56737	1·7538689	·75324	2·119257	0·3261836
·35	12·60	·58047	1·7637828	·76189	2·204820	0·3433741
·36	12·96	·59336	1·7733184	·77030	2·290959	0·3600173
·37	13·32	·60602	1·7824872	·77847	2·377611	0·3761405
·38	13·68	·61846	1·7913128	·78642	2·464749	0·3917727
·39	14·04	·63068	1·7998108	·79415	2·552337	0·4069380
·40	14·40	·64249	1·8080043	·80168	2·640330	0·4216550
·41	14·76	·65445	1·8158766	·80898	2·728684	0·4359530
·42	15·12	·66660	1·8234726	·81605	2·817375	0·4498451
·43	15·48	·67731	1·8307896	·82289	2·906352	0·4633482
·44	15·84	·68840	1·8378416	·82950	2·995587	0·4764819
·45	16·20	·69924	1·8446578	·83621	3·085047	0·4892645
·46	16·56	·70974	1·8511037	·84216	3·174678	0·5016907
·47	16·92	·72032	1·8575275	·84872	3·264723	0·5138164
·48	17·28	·73012	1·8633712	·85461	3·353356	0·5256663
·49	17·64	·74033	1·8692463	·86042	3·443500	0·5372040
·50	18·00	·75000	1·8750613	·86602	3·534292	0·5484924

TABLE XX —*continued*

Depth on Inverse—1 by Diameter	Depth on Inverse in Ins	Hydraulic Mean Depth R in Feet	log (R)	$\sqrt{R}$ in Feet	Area of Cross Section in Square Feet	log (A)
51	18 36	75944	1 8804952	87146	3 624232	0 5592230
52	18 72	76861	1 8857057	87670	3 714246	0 5698706
53	19 08	77749	1 8906937	88175	3 804129	0 5802502
54	19 44	78636	1 8956216	88677	3 893904	0 5903852
55	19 80	79466	1 9001801	89143	3 983535	0 6002686
56	20 16	80283	1 9046268	89601	4 072995	0 6099139
57	20 52	81076	1 9088893	90042	4 162230	0 6193261
58	20 88	81841	1 9129714	90466	4 251204	0 6285119
59	21 24	82580	1 9168782	90874	4 339899	0 6374796
60	21 60	83298	1 9206341	91267	4 428252	0 6462323
61	21 96	83979	1 9241704	91640	4 516245	0 6547776
62	22 32	84637	1 9275618	91998	4 603833	0 6631196
63	22 68	85267	1 9307849	92340	4 690971	0 6712627
64	23 04	85870	1 9338416	92666	4 777623	0 6792118
65	23 40	86444	1 9367365	92975	4 863762	0 6869723
66	23 76	86989	1 9394660	93268	4 949325	0 6945450
67	24 12	87503	1 9420319	93544	5 034276	0 7019370
68	24 48	87988	1 9444267	93802	5 118588	0 7091501
69	24 84	88445	1 9466761	94045	5 202198	0 7161869
70	25 20	88870	1 9487571	94271	5 285070	0 7230507
71	25 56	89263	1 9506724	94479	5 367150	0 7297437
72	25 92	89624	1 9524238	94670	5 448402	0 7362692
73	26 28	89952	1 9540096	94843	5 518772	0 7426287
74	26 64	90246	1 9554287	94998	5 608115	0 7488247
75	27 00	90506	1 9566781	95134	5 686668	0 7548579
76	27 36	90731	1 9577548	95252	5 764077	0 7607297
77	27 72	90919	1 9586571	95351	5 840397	0 7664424
78	28 08	91070	1 9593796	95431	5 915556	0 7719955
79	28 44	91184	1 9599193	95490	5 989500	0 7773906
80	28 80	91257	1 9602679	95528	6 062166	0 7826252
81	29 16	91292	1 9604272	95546	6 133482	0 7877071
82	29 52	91281	1 9603818	95541	6 203367	0 7926270
83	29 88	91227	1 9601263	95513	6 271758	0 7973892
84	30 24	91128	1 9596522	95461	6 338574	0 8019916
85	30 60	90980	1 9589462	95383	6 403707	0 8064314
86	30 96	90781	1 9579971	95279	6 467085	0 8107086
87	31 32	90529	1 9567878	95146	6 528531	0 8148195
88	31 68	90219	1 9553000	94984	6 588117	0 8187613
89	32 04	89848	1 9535104	94788	6 645528	0 8225295
90	32 40	89411	1 9513910	94557	6 700707	0 8261207
91	32 76	88901	1 9489069	94287	6 753074	0 8295273
92	33 12	88311	1 9460133	93973	6 79 067	0 8327430
93	33 48	87630	1 9426518	93610	6 851070	0 8357584
94	33 84	86844	1 9387423	93190	6 895431	0 8385614
95	34 20	85949	1 9342439	92703	6 936453	0 8411374
96	34 56	84936	1 9297720	92233	6 973740	0 8434657
97	34 92	83670	1 9222606	91439	7 006788	0 8455190
98	35 28	82054	1 9141014	90584	7 034841	0 8472543
989	35 60	80220	1 9042810	89565	7 054785	0 8484838
990	35 64	79764	1 9028982	89323	7 056621	0 8485968
991	35 67	79713	1 9017293	89282	7 058367	0 8487043
992	35 71	79448	1 9008407	89128	7 060014	0 8488056
993	35 74	79194	1 8986916	88990	7 061571	0 8489013
994	35 78	78932	1 8967936	88787	7 063011	0 8489899
995	35 82	78488	1 8948039	88593	7 064353	0 8490718
996	35 85	78115	1 8927348	88382	7 065549	0 8491457
997	35 89	77659	1 8903617	88141	7 066711	0 8492112
998	35 92	77187	1 8875437	87856	7 067511	0 8492665
999	35 96	76675	1 8754943	86645	7 068204	0 8493090
1 000	36 00	75000	1 8750613	86602	7 068583	0 8493324

TABLE XXI.—GIVING THE VALUES OF R, LOG. R, $\sqrt{R}$, A, AND LOG. A FOR CIRCULAR PIPES, *CONDUITS AND SEWERS, FLOWING* FULL; WHEN HALF FULL REDUCE (A) BY ONE HALF.

Diameter. Feet.	Inches.	(R) in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	A = Area in Square Feet.	log. (A.)
	$\frac{3}{8}$	·0078	$\bar{3}$·8927901	·088	·00077	$\bar{4}$·8847901
	$\frac{1}{2}$	·0104	$\bar{2}$·0177288	·102	·00136	$\bar{3}$·1346675
	$\frac{3}{4}$	·0156	$\bar{2}$·1938201	·125	·00307	$\bar{3}$·4868501
	1	·0208	$\bar{2}$·3187588	·144	·00545	$\bar{3}$·7367275
	$1\frac{1}{4}$	·0260	$\bar{2}$·4156688	·161	·00852	$\bar{3}$·9305475
	$1\frac{1}{2}$	·0312	$\bar{2}$·4948501	·177	·01227	$\bar{2}$·0889101
	$1\frac{3}{4}$	·0364	$\bar{2}$·5617968	·191	·01670	$\bar{2}$·2228035
	2	·0417	$\bar{2}$·6197887	·204	·02182	$\bar{2}$·3387873
	$2\frac{1}{2}$	·052	$\bar{2}$·7166988	·228	·0341	$\bar{2}$·5326075
	3	·063	$\bar{2}$·7958800	·251	·0491	$\bar{2}$·6909699
	4	·084	$\bar{2}$·9208187	·290	·0873	$\bar{2}$·9408473
	5	·104	$\bar{1}$·0177288	·323	·136	$\bar{1}$·1346675
	6	·125	$\bar{1}$·0969100	·354	·196	$\bar{1}$·2930299
	7	·146	$\bar{1}$·1638568	·382	·267	$\bar{1}$·4269235
	8	·167	$\bar{1}$·2218487	·408	·349	$\bar{1}$·5429073
	9	·187	$\bar{1}$·2730013	·433	·442	$\bar{1}$·6452125
	10	·208	$\bar{1}$·3187588	·456	·545	$\bar{1}$·7367275
	11	·229	$\bar{1}$·3601515	·479	·660	$\bar{1}$·8195129
1	0	·250	$\bar{1}$·3979400	·5	·785	$\bar{1}$·8950899
1	1	·271	$\bar{1}$·4327022	·52	·922	$\bar{1}$·9646143
1	2	·292	$\bar{1}$·4648868	·54	1·069	0·0289835
1	3	·313	$\bar{1}$·4948501	·559	1·227	0·0889101
1	4	·333	$\bar{1}$·5228788	·577	1·396	0·1449675
1	5	·354	$\bar{1}$·5492077	·595	1·576	0·1976253
1	6	·375	$\bar{1}$·5740313	·612	1·767	0·2472725
1	7	·396	$\bar{1}$·5975124	·629	1·969	0·2942347
1	8	·417	$\bar{1}$·6197888	·646	2·182	0·3387875
1	9	·437	$\bar{1}$·6409781	·661	2·405	0·3811661
1	10	·458	$\bar{1}$·6611815	·677	2·640	0·4215729
1	11	·479	$\bar{1}$·6804866	·692	2·885	0·4601831
2	0	·5	$\bar{1}$·6989700	·707	3·142	0·4971499
2	1	·521	$\bar{1}$·7166988	·722	3·409	0·5326075
2	2	·542	$\bar{1}$·7337321	·736	3·687	0·5666741
2	3	·562	$\bar{1}$·7501826	·75	3·976	0·5994551

TABLE XXI—GIVING THE VALUES OF R, LOG R, $\sqrt{R}$, A, AND LOG A FOR CIRCULAR PIPES, CONDUITS AND SEWERS FLOWING FULL, WHEN HALF FULL REDUCE (A) BY ONE HALF

Diameter Feet	Diameter Inches	(R) in Feet	log (R)	$\sqrt{R}$ in Feet.	A = Area in Square Feet	log (A)
4	7	1 146	0 0591215	1 070	16 490	1 2174529
4	8	1 167	0 0669468	1 080	17 104	1 2331035
4	9	1 187	0 0746337	1 089	17 721	1 2484773
4	10	1 208	0 0821868	1 093	18 348	1 2635835
4	11	1 229	0 0896105	1 109	18 986	1 2784315
5	0	1 25	0 0969100	1 118	19 635	1 2930299
5	1	1 271	0 1040886	1 127	20 295	1 3073871
5	2	1 292	0 1111505	1 137	20 966	1 3215109
5	3	1 312	0 1181093	1 146	21 648	1 3354285
5	4	1 333	0 1249388	1 155	22 340	1 3490875
5	5	1 354	0 1316722	1 164	23 044	1 3625543
5	6	1 375	0 1383027	1 173	23 758	1 3758153
5	7	1 396	0 1448336	1 181	24 484	1 3888771
5	8	1 417	0 1512677	1 190	25 220	1 4017453
5	9	1 437	0 1576079	1 199	25 967	1 4144237
5	10	1 458	0 1638568	1 208	26 725	1 4269235
5	11	1 479	0 1700171	1 216	27 494	1 4392441
6	0	1 5	0 1760913	1 225	28 274	1 4513925
6	3	1 562	0 1938201	1 250	30 680	1 4868501
6	6	1 625	0 2108534	1 275	33 183	1 5209167
6	9	1 687	0 2272438	1 299	35 783	1 5536975
7	0	1 75	0 2430380	1 323	38 485	1 5852853
7	3	1 812	0 2582780	1 346	41 283	1 6157659
7	6	1 879	0 2730013	1 369	44 179	1 6452125
7	9	1 937	0 2872417	1 392	47 173	1 6736933
8	0	2	0 3010300	1 414	50 266	1 7012691
8	3	2 062	0 3143939	1 436	53 456	1 7279377
8	6	2 125	0 3273589	1 458	56 745	1 7539277
8	9	2 187	0 3399481	1 479	60 132	1 7791061
9	0	2 25	0 3521825	1 500	63 617	1 8035743
9	3	2 312	0 3640817	1 521	67 201	1 8273733
9	6	2 375	0 37 66636	1 541	70 882	1 8505371
9	9	2 437	0 3869446	1 561	74 662	1 8730131
10	0	2 5	0 3979400	1 581	78 540	1 8950501
10	3	2 562	0 4086639	1 601	82 516	1 9165377
10	6	2 625	0 4191243	1 620	86 590	1 9374685
10	9	2 687	0 4293485	1 639	90 763	1 9579061
11	0	2 750	0 4393327	1 658	95 033	1 9778753
11	3	2 812	0 4490925	1 677	99 402	1 9973349
11	6	2 875	0 4586378	1 696	103 869	2 0164855
11	9	2 937	0 4679779	1 714	108 434	2 0351677
12	0	3	0 4771212	1 732	113 098	2 0534523
12	3	3 062	0 4860761	1 750	117 859	2 0713621
12	6	3 125	0 4948500	1 768	122 719	2 0889011
12	9	3 187	0 5034502	1 785	127 677	2 1061101
13	0	3 25	0 5118834	1 803	132 733	2 1229767
13	3	3 312	0 5201559	1 820	137 887	2 1395217
13	6	3 375	0 5282738	1 837	143 139	2 1557573
13	9	3 437	0 536 2427	1 854	148 490	2 1716953
14	0	3 5	0 5440680	1 871	153 938	2 1873459
14	6	3 625	0 5 530 80	1 904	165 130	2 2178209
15	0	3 75	0 5740313	1 936	176 715	2 2472725
15	6	3 875	0 5882717	1 968	188 692	2 2757758
16	0	4	0 6020600	2	201 062	2 3033233
16	6	4 125	0 6154239	2 031	213 825	2 3300577
17	0	4 250	0 6283889	2 061	226 981	2 3559877
17	6	4 375	0 6409780	2 091	240 529	2 3811659
18	0	4 5	0 6532125	2 121	254 470	2 4056343
19	0	4 75	0 6676936	2 180	283 529	2 4527971
20	0	5	0 6989700	2 236	314 159	2 4971499

TABLE XXI.—GIVING THE VALUES OF R, LOG. R, $\sqrt{R}$, A, AND LOG. A FOR CIRCULAR PIPES, CONDUITS AND SEWERS, FLOWING FULL: WHEN HALF FULL REDUCE (A) BY ONE HALF.

Diameter. Feet.	Inches.	(R) in Feet.	log. (R.)	$\sqrt{R}$ in Feet.	A = Area in Square Feet.	log. (A.)
	¼	·0078	2·8927901	·088	·00077	1·8847901
	⅜	·0101	2·0177288	·102	·00136	3·1316675
	½	·0156	2·1938201	·125	·00307	3·4868501
	¾	·0208	2·3187588	·144	·00545	3·7367275
	1¼	·0260	2·4156688	·161	·00852	3·9305475
	1½	·0312	2·4918501	·177	·01227	2·0889101
	1¾	·0361	2·5617968	·191	·01670	2·2228035
	2	·0417	2·6197887	·204	·02182	2·3387873
	2½	·052	2·7166988	·228	·0311	2·5326075
	3	·063	2·7958800	·251	·0491	2·6909699
	4	·084	2·9208187	·290	·0873	2·9408473
	5	·104	1·0177288	·323	·136	1·1316675
	6	·125	1·0969100	·354	·196	1·2930299
	7	·146	1·1638568	·382	·267	1·4269235
	8	·167	1·2218487	·408	·349	1·5429073
	9	·187	1·2730013	·433	·442	1·6452125
	10	·208	1·3187588	·456	·545	1·7367275
	11	·229	1·3601515	·479	·660	1·8195129
1	0	·250	1·3979400	·5	·785	1·8950899
1	1	·271	1·4327022	·52	·922	1·9646113
1	2	·292	1·4648868	·54	1·069	0·0289835
1	3	·313	1·4948501	·559	1·227	0·0889101
1	4	·333	1·5228788	·577	1·396	0·1449675
1	5	·354	1·5492077	·595	1·576	0·1976253
1	6	·375	1·5740313	·612	1·767	0·2472725
1	7	·396	1·5975124	·629	1·969	0·2942347
1	8	·417	1·6197888	·646	2·182	0·3387875
1	9	·437	1·6409781	·661	2·405	0·3811661
1	10	·458	1·6611815	·677	2·640	0·4215729
1	11	·479	1·6801866	·692	2·885	0·4601831
2	0	·5	1·6989700	·707	3·142	0·4971499
2	1	·521	1·7166988	·722	3·409	0·5326075
2	2	·542	1·7337321	·736	3·687	0·5666741
2	3	·562	1·7501226	·75	3·976	0·5994551
2	4	·583	1·7659168	·764	4·276	0·6310435
2	5	·604	1·7811568	·777	4·587	0·6615235
2	6	·625	1·7958801	·79	4·909	0·6909701
2	7	·646	1·8101205	·804	5·241	0·7194509
2	8	·667	1·8239088	·817	5·585	0·7470275
2	9	·687	1·8372727	·829	5·939	0·7737553
2	10	·708	1·8502377	·842	6·305	0·7996853
2	11	·729	1·8628268	·854	6·681	0·8248635
3	0	·75	1·8750613	·866	7·068	0·8493325
3	1	·771	1·8869605	·878	7·466	0·8731309
3	2	·792	1·8985424	·89	7·875	0·8962947
3	3	·812	1·9098234	·901	8·295	0·9188567
3	4	·833	1·9208188	·913	8·726	0·9408475
3	5	·854	1·9315427	·924	9·169	0·9622953
3	6	·875	1·9420080	·935	9·621	0·9832259
3	7	·896	1·9522273	·946	10 084	1·0036645
3	8	·917	1·9622115	·957	10·559	1·0236329
3	9	·937	1·9719713	·968	11·044	1·0431525
3	10	·958	1·9815166	·979	11·541	1·0622431
3	11	·979	1·9908567	·99	12·048	1·0809233
4	0	1·	0·0000000	1·	12·566	1·0992099
4	1	1·021	0·0089549	1·01	13·096	1·1171197
4	2	1·042	0·0177288	1·021	13·635	1·1346675
4	3	1·062	0·0263290	1·031	14·186	1·1518679
4	4	1·083	0·0347621	1·041	14·748	1·1687341
4	5	1·104	0·0430317	1·051	15·321	1·1852793
4	6	1·125	0·0511525	1·061	15 904	1·2015149

TABLE XXII.—AREA AND HYDRAULIC MEAN DEPTH OF EGG-SHAPED SEWERS. (OLD FORM.)

Dimensions of Sewer. Width. Ft.	Ins.	Height. Ft.	Ins.	Flowing full: Hydraulic Mean Depth. Feet.	log. (R.)	√R Feet.	Sectional Area. Square Feet.	log. (A.)	Flowing two-thirds full: Hydraulic Mean Depth. Feet.	log. (R.)	√R Feet.	Sectional Area. Square Feet.	log. (A.)	Flowing one-third full: Hydraulic Mean Depth. Feet.	log. (R.)	√R Feet.	Sectional Area. Square Feet.	log. (A.)
1	0	1	6	·2897	1̄·4619185	·53823	1·1485	0·0601310	·3157	1̄·4992716	·56187	·7558	1̄·8784069	·2066	1̄·3151303	·45453	·2650	1̄·4233183
1	2	1	9	·3380	1̄·5288953	·58137	1·5632	0·1940246	·3683	1̄·5662211	·60687	1·0287	0·0122965	·2413	1̄·3824771	·49121	·3866	1̄·5872119
1	4	2	0	·3863	1̄·5868873	·62007	2·0418	0·3100086	·4209	1̄·6242131	·64876	1·3436	0·1282845	·2755	1̄·4401291	·52488	·5049	1̄·7031959
1	6	2	3	·4345	1̄·6380398	·65915	2·5841	0·4123136	·4735	1̄·6753659	·68811	1·7005	0·2305895	·3099	1̄·4912216	·55668	·6391	1̄·8055043
1	8	2	6	·4828	1̄·6837973	·69483	3·1903	0·5038286	·5262	1̄·7211232	·72539	2·0994	0·3221045	·3443	1̄·5369791	·58677	·7889	1̄·8970159
1	10	2	9	·5311	1̄·7251900	·72876	3·8602	0·5866110	·5788	1̄·7625161	·76078	2·5402	0·4048599	·3786	1̄·5783718	·61530	·9545	1̄·9798013
2	0	3	0	·5794	1̄·7629785	·76118	4·5940	0·6621910	·6311	1̄·8003046	·79160	3·0232	0·4804669	·4132	1̄·6161603	·64280	1·1360	0·0553783
2	2	3	3	·6277	1̄·7977106	·79227	5·3916	0·7317152	·6840	1̄·8350667	·82701	3·5480	0·5499211	·4476	1̄·6509224	·66902	1·3332	0·1249025
2	4	3	6	·6760	1̄·8299253	·82219	6·2529	0·7960816	·7366	1̄·8672514	·85825	4·1119	0·6143605	·4820	1̄·6830071	·69426	1·5462	0·1892719
2	6	3	9	·7242	1̄·8598885	·85099	7·1781	0·8560110	·7892	1̄·8972146	·88836	4·7237	0·6742869	·5165	1̄·7130703	·71867	1·7750	0·2491983
2	8	4	0	·7725	1̄·8879173	·87891	8·1671	0·9120686	·8418	1̄·9252131	·91749	5·3746	0·7303115	·5509	1̄·7410991	·74245	2·0195	0·3052559
2	10	4	3	·8208	1̄·9142162	·90598	9·2199	0·9647261	·8944	1̄·9515723	·94572	6·0671	0·7830023	·5852	1̄·7673280	·76498	2·2799	0·3579137
3	0	4	6	·8691	1̄·9390698	·93225	10·3365	1·0143736	·9471	1̄·9763959	·97319	6·8022	0·8326495	·6198	1̄·7922516	·78727	2·5569	0·4075609
3	2	4	9	·9174	1̄·9625509	·95780	11·5169	1·0613358	·9997	1̄·9998770	·99984	7·5790	0·8796117	·6542	1̄·8157327	·80882	2·8479	0·4545231
3	4	5	0	·9657	1̄·9848273	·98270	12·7611	1·1058886	1·0523	0·0221531	1·0258	8·3978	0·9241615	·6887	1̄·8380091	·82987	3·1556	0·4990759
3	6	5	3	1·0139	0·0050165	1·0059	14·0691	1·1482670	1·1049	0·0433126	1·0509	9·2585	0·9665129	·7231	1̄·8591983	·85015	3·4790	0·5414513
3	8	5	6	1·0622	0·0262200	1·0291	15·4099	1·1886740	1·1576	0·0635161	1·0759	10·1613	1·0069199	·7575	1̄·8794018	·87034	3·8182	0·5818613
3	10	5	9	1·1105	0·0455251	1·0538	16·8766	1·2272812	1·2102	0·0828512	1·1056	11·1061	1·0455601	·7920	1̄·8987069	·88994	4·1732	0·6204715
4	0	6	0	1·1588	0·0640085	1·0752	18·3760	1·2642510	1·2628	0·1013346	1·1247	12·0928	1·0825269	·8264	1̄·9171903	·90906	4·5440	0·6574383
4	2	6	3	1·2071	0·0817373	1·0986	19·9392	1·2997086	1·3154	0·1190631	1·1455	13·1215	1·1179845	·8608	1̄·9349191	·92779	4·9396	0·6928959
4	4	6	6	1·2554	0·0987703	1·1204	21·5663	1·3337752	1·3680	0·1360967	1·1696	14·1922	1·1520511	·8952	1̄·9519521	·94615	5·3229	0·7260625
4	6	6	9	1·3036	0·1151610	1·1401	23·2571	1·3665560	1·4206	0·1524871	1·1918	15·3049	1·1848319	·9297	1̄·9683428	·96420	5·7501	0·7597133
4	8	7	0	1·3519	0·1309553	1·1627	25·0117	1·3981146	1·4733	0·1682811	1·2137	16·4596	1·2164205	·9641	1̄·9841371	·98186	6·1819	0·7913319
4	10	7	3	1·4002	0·1461953	1·1833	26·8302	1·4286246	1·5258	0·1835214	1·2352	17·6563	1·2469005	·9986	1̄·9993771	·99929	6·6316	0·8216119
5	0	7	6	1·4485	0·1609185	1·2023	28·7125	1·4580710	1·5785	0·1982116	1·2563	18·8950	1·2763169	1·0330	0·0141003	1·0163	7·1000	0·8512583

TABLE XXII.—*continued*—AREA AND HYDRAULIC MEAN DEPTH OF EGG SHAPED SEWERS (OLD FORM)

Dimensions of Sewer				Flowing full					Flowing two thirds full					Flowing one third full				
Width		Height		Hydraulic Mean Depth. Feet	log (R)	$\sqrt{R}$ Feet	Sectional Area Square Feet	log (A)	Hydraulic Mean Depth Feet	log (R)	$\sqrt{R}$ Feet	Sectional Area Square Feet	log (A)	Hydraulic Mean Depth Feet	log (R)	$\sqrt{R}$ Feet	Sectional Area Square Feet.	log (A)
Ft	Ins	Ft	Ins															
5	2	7	9	1 4968	0 1751590	1 2220	30 6643	1 4865520	1 6311	0 2124801	1 262	20 17 57	1 3048279	1 067	0 0283408	1 0331	7 5812	0 8797393
5	4	8	0	1 5451	0 1889473	1 2430	32 6684	1 5141286	1 6836	0 2262734	1 297	21 4083	1 3324045	1 1019	0 0421201	1 0485	8 0782	0 9073159
5	6	8	3	1 5933	0 2023112	1 2622	34 7421	1 5208564	1 7363	0 2396373	1 3176	22 8629	1 3591323	1 1363	0 0554930	1 0660	8 5910	0 9340437
5	8	8	6	1 6416	0 2152762	1 2812	36 8796	1 5671864	1 7890	0 2526023	1 3375	24 2636	1 3850623	1 1707	0 0684580	1 0819	9 1196	0 9599737
5	10	8	9	1 6899	0 2278653	1 2999	39 0809	1 5919646	1 8415	0 2651914	1 3570	25 7182	1 4102405	1 2052	0 0810471	1 0965	9 6633	0 9851519
6	0	9	0	1 7382	0 2400998	1 3184	41 3460	1 6164336	1 8942	0 2788767	1 3755	27 2088	1 4347035	1 2336	0 0932816	1 1133	10 2240	1 0096209
6	2	9	3	1 787	0 2519990	1 3367	43 676	1 6402320	1 947	0 2933251	1 3953	28 742	1 4585079	1 274	0 1051808	1 1287	10 800	1 0334193
6	4	9	6	1 835	0 2636809	1 3546	46 068	1 6633958	1 999	0 3069070	1 4138	30 317	1 4816717	1 309	0 1167627	1 1441	11 391	1 0636831
6	6	9	9	1 883	0 2748619	1 3722	48 532	1 6859578	2 052	0 3121880	1 4324	31 933	1 5042337	1 343	0 1280437	1 1588	11 999	1 0791451
6	8	10	0	1 931	0 2858573	1 3896	51 046	1 7079486	2 093	0 3241834	1 4474	33 592	1 5282245	1 377	0 1390331	1 1734	12 622	1 1011959
6	10	10	3	1 980	0 2963812	1 4071	53 629	1 7293964	2 157	0 3339073	1 4686	35 232	1 5476723	1 412	0 1497630	1 1882	13 261	1 1225837
7	0	10	6	2 028	0 3070463	1 4240	56 278	1 7503270	2 210	0 3443726	1 4866	37 03	1 5686029	1 446	0 1602283	1 2024	13 916	1 1435143
7	4	11	0	2 124	0 3272500	1 4573	61 764	1 7907340	2 315	0 3645761	1 5215	40 646	1 6090059	1 515	0 1704318	1 2309	15 273	1 1839213
7	8	11	6	2 221	0 3465501	1 4903	67 508	1 8293442	2 420	0 3838812	1 5592	44 426	1 6476201	1 584	0 1797369	1 2585	16 693	1 2325315
8	0	12	0	2 318	0 3650380	1 5224	73 206	1 8663110	2 526	0 4023646	1 5893	48 372	1 6845869	1 653	0 2182203	1 2856	18 176	1 2594983
8	4	12	6	2 414	0 3827673	1 5537	79 768	1 9017686	2 631	0 4200934	1 6220	52 487	1 7200445	1 722	0 2359431	1 3137	19 722	1 2949559
8	8	13	0	2 511	0 3998006	1 5846	86 269	1 9358302	2 736	0 4371267	1 6540	56 771	1 7541111	1 791	0 2523824	1 3382	21 331	1 3290225
9	0	13	6	2 607	0 4161910	1 6146	93 031	1 9686160	2 841	0 4535171	1 6853	61 222	1 7868319	1 859	0 2693726	1 3634	23 004	1 3618033
9	4	14	0	2 704	0 4319853	1 6443	100 049	2 0002046	2 947	0 4693114	1 7166	65 840	1 8184805	1 928	0 2851671	1 3885	24 739	1 3933919
9	8	14	6	2 800	0 4472253	1 6733	107 324	2 0306846	3 052	0 4843014	1 7469	70 628	1 8489605	1 997	0 3004071	1 4131	26 538	1 4238719
10	0	15	0	2 897	0 4619483	1 7020	114 853	2 0601310	3 157	0 4992746	1 7767	75 582	1 8784069	2 066	0 3151303	1 4373	28 400	1 4533183
10	6	15	9	3 042	0 4831376	1 7441	126 625	2 1025096	3 315	0 5204630	1 8207	83 330	1 9207855	2 169	0 3363196	1 4778	31 311	1 4956969
11	0	16	6	3 187	0 5033412	1 7852	138 972	2 1429164	3 473	0 5406673	1 8635	91 455	1 9611923	2 273	0 3566230	1 5076	34 364	1 5361037
12	0	18	0	3 476	0 5411297	1 8644	165 388	2 2194944	3 788	0 5784578	1 9462	108 838	2 0367693	2 479	0 3943115	1 5744	40 892	1 6116807

TABLE XXIII.—AREA AND HYDRAULIC MEAN DEPTH OF EGG-SHAPED SEWERS. (NEW FORM.)

Flowing full.

Width Ft.	Width Ins.	Height Ft.	Height Ins.	Hydraulic Mean Depth. Feet.	log. (R.)	√R Feet.	Sectional Area. Square Feet	log. (A.)
1	0	1	6	·2844	1̄·4539502	·53329	1·1150	0·0472877
1	2	1	9	·3318	1̄·5208970	·57602	1·5176	0·1811813
1	4	2	0	·3792	1̄·5788890	·61549	1·9822	0·2971653
1	6	2	3	·4266	1̄·6300415	·65007	2·5087	0·3994703
1	8	2	6	·4740	1̄·6757990	·68847	3·0972	0·4909853
1	10	2	9	·5214	1̄·7171917	·72208	3·7476	0·5737707
2	0	3	0	·5688	1̄·7549802	·75419	4·4600	0·6493477
2	2	3	3	·6162	1̄·7897123	·78498	5·2343	0·7188719
2	4	3	6	·6636	1̄·8219270	·81461	6·0705	0·7832113
2	6	3	9	·7110	1̄·8518902	·84320	6·9687	0·8431677
2	8	4	0	·7584	1̄·8799190	·87086	7·9288	0·8992252
2	10	4	3	·8058	1̄·9062479	·89766	8·9509	0·9518831
3	0	4	6	·8532	1̄·9310715	·92369	10·0349	1·0015303
3	2	4	9	·9006	1̄·9545526	·94899	11·1809	1·0484917
3	4	5	0	·9480	1̄·9768290	·97365	12·3888	1·0930153
3	6	5	3	·9954	1̄·9980182	·99769	13·6586	1·1354237
3	8	5	6	1·0428	0·0182217	1·0212	14·9901	1·1758307
3	10	5	9	1·0902	0·0375268	1·0441	16·3842	1·2144109
4	0	6	0	1·1376	0·0560102	1·0665	17·8399	1·2514077
4	2	6	3	1·1850	0·0737390	1·0886	19·3575	1·2868653
4	4	6	6	1·2324	0·0907723	1·1101	20·9371	1·3209319
4	6	6	9	1·2798	0·1071627	1·1312	22·5786	1·3537127
4	8	7	0	1·3272	0·1229570	1·1520	24·2820	1·3853013
4	10	7	3	1·3746	0·1381970	1·1724	26·0471	1·4157813
5	0	7	6	1·4220	0·1529202	1·1924	27·8748	1·4452277
5	2	7	9	1·4694	0·1671607	1·2115	29·7641	1·4737087
5	4	8	0	1·5168	0·1809490	1·2315	31·7153	1·5012853
5	6	8	3	1·5642	0·1943129	1·2506	33·7285	1·5280131
5	8	8	6	1·6116	0·2072779	1·2694	35·8036	1·5539131
5	10	8	9	1·6590	0·2198670	1·2880	37·9107	1·5791213
6	0	9	0	1·7064	0·2321015	1·3072	40·1397	1·6035903

Flowing two-thirds full.

Width Ft.	Width Ins.	Height Ft.	Height Ins.	Hydraulic Mean Depth. Feet.	log. (R.)	√R Feet.	Sectional Area. Square Feet	log. (A.)
1	0	1	6	·3074	1̄·4877315	·55445	·7228	1̄·8587581
1	2	1	9	·3586	1̄·5546783	·59883	·9831	1̄·9925317
1	4	2	0	·4099	1̄·6126707	·64023	1·2841	0·1085157
1	6	2	3	·4611	1̄·6638228	·67904	1·6252	0·2109257
1	8	2	6	·5123	1̄·7095803	·71575	2·0631	0·3145537
1	10	2	9	·5636	1̄·7509730	·75073	2·4277	0·3852211
2	0	3	0	·6148	1̄·7887615	·78409	2·8829	0·4597981
2	2	3	3	·6660	1̄·8235236	·81608	3·3948	0·5308228
2	4	3	6	·7173	1̄·8557053	·84693	3·9425	0·5958017
2	6	3	9	·7685	1̄·8856715	·87664	4·5144	0·6546181
2	8	4	0	·8197	1̄·9137003	·90537	5·1361	0·7106757
2	10	4	3	·8710	1̄·9400292	·93327	5·7985	0·7633335
3	0	4	6	·9222	1̄·9648528	·96031	6·5047	0·8129807
3	2	4	9	·9734	1̄·9883339	·98661	7·2131	0·8580429
3	4	5	0	1·0247	0·0106103	1·0122	8·0256	0·9044957
3	6	5	3	1·0759	0·0317995	1·0373	8·8482	0·9468711
3	8	5	6	1·1271	0·0520050	1·0616	9·7110	0·9872811
3	10	5	9	1·1784	0·0713981	1·0855	10·6139	1·0258913
4	0	6	0	1·2296	0·0897915	1·1089	11·5569	1·0628581
4	2	6	3	1·2808	0·1075203	1·1317	12·5400	1·0983157
4	4	6	6	1·3321	0·1245536	1·1541	13·5633	1·1323823
4	6	6	9	1·3833	0·1409140	1·1761	14·6267	1·1651631
4	8	7	0	1·4345	0·1567383	1·1977	15·7302	1·1967517
4	10	7	3	1·4858	0·1719783	1·2188	16·8738	1·2272317
5	0	7	6	1·5370	0·1867015	1·2397	18·0576	1·2566781
5	2	7	9	1·5882	0·2009120	1·2602	19·2815	1·2851591
5	4	8	0	1·6395	0·2147303	1·2804	20·5455	1·3127357
5	6	8	3	1·6907	0·2280912	1·3002	21·8497	1·3394635
5	8	8	6	1·7419	0·2410592	1·3198	23·1910	1·3653935
5	10	8	9	1·7932	0·2536183	1·3391	24·5781	1·3905717
6	0	9	0	1·8444	0·2658698	1·3580	26·0029	1·4150207

Flowing one-third full.

Width Ft.	Width Ins.	Height Ft.	Height Ins.	Hydraulic Mean Depth. Feet.	log. (R.)	√R Feet.	Sectional Area. Square Feet	log. (A.)
1	0	1	6	·1920	1̄·2833241	·43817	·2545	1̄·4056466
1	2	1	9	·2240	1̄·3501879	·47328	·3461	1̄·5392011
1	4	2	0	·2560	1̄·4081800	·50596	·4521	1̄·6551881
1	6	2	3	·2880	1̄·4593925	·53666	·5722	1̄·7574853
1	8	2	6	·3200	1̄·5050500	·56568	·7063	1̄·8489981
1	10	2	9	·3520	1̄·5464626	·59329	·8547	1̄·9317953
2	0	3	0	·3840	1̄·5842541	·61967	1·0172	0·0075707
2	2	3	3	·4160	1̄·6190452	·64498	1·1938	0·0768947
2	4	3	6	·4480	1̄·6511979	·66932	1·3845	0·1412641
2	6	3	9	·4800	1̄·6811611	·69282	1·5894	0·2011965
2	8	4	0	·5120	1̄·7092892	·71554	1·8081	0·2572181
2	10	4	3	·5440	1̄·7355188	·73756	2·0415	0·3099659
3	0	4	6	·5760	1̄·7604124	·75894	2·2887	0·3595531
3	2	4	9	·6080	1̄·7838255	·77974	2·5501	0·4067153
3	4	5	0	·6400	1̄·8061800	·80000	2·8256	0·4510681
3	6	5	3	·6720	1̄·8273891	·81975	3·1152	0·4934465
3	8	5	6	·7040	1̄·8475826	·83904	3·4190	0·5338535
3	10	5	9	·7360	1̄·8668977	·85790	3·7369	0·5724637
4	0	6	0	·7680	1̄·8852811	·87635	4·0689	0·6094305
4	2	6	3	·8000	1̄·9030900	·89443	4·4150	0·6448881
4	4	6	6	·8320	1̄·9201452	·91214	4·7733	0·6789517
4	6	6	9	·8640	1̄·9365336	·92951	5·1479	0·7117355
4	8	7	0	·8960	1̄·9522279	·94657	5·5382	0·7433241
4	10	7	3	·9280	1̄·9675679	·96332	5·9408	0·7738011
5	0	7	6	·9600	1̄·9822712	·97979	6·3576	0·8032805
5	2	7	9	·9920	1̄·9965116	·99599	6·7885	0·8317715
5	4	8	0	1·0240	0·0102999	1·0119	7·2335	0·8593081
5	6	8	3	1·0560	0·0236638	1·0276	7·6927	0·8860359
5	8	8	6	1·0880	0·0366188	1·0430	8·1660	0·9119659
5	10	8	9	1·1200	0·0492180	1·0583	8·6531	0·9371411
6	0	9	0	1·1520	0·0614525	1·0733	9·1519	0·9615131

TABLE XXIV.—V-SHAPED FLUME, RIGHT-ANGLED CROSS SECTION

Depth of Water in Feet	R = Hydraulic Mean Depth in Feet.	log (R)	$\sqrt{R}$ Feet	A = Area in Square Feet	log (A)	Depth of Water in Feet.	R = Hydraulic Mean Depth in Feet	log (R)	$\sqrt{R}$ Feet.	A = Area in Square Feet	log (A)
40	141	I 1505150	3755	16	I 2041200	1 7›	618	I 7914930	7861	3 06	0 4860760
5	177	I 2474250	4207	25	I 3979400	1 8	636	1 8037275	7974	3 24	0 5105450
6	212	I 3266063	4604	36	I ››6 3026	1 9	672	I 8272086	8197	3 61	0 5575072
7	247	I 3935530	4969	49	I 6901960	2	707	I 84948›0	8408	4	0 6020600
75	26›	I 423›163	5147	56	I 7501226	2 1	743	I 8706743	8619	4 41	0 6444386
8	283	I 4515450	5319	64	I 8061800	2 2	778	I 8908777	8820	4 84	0 6848454
9	318	I 5026975	5639	81	I 9084850	2 2›	795	I 9006375	8916	5 06	0 7043650
1	354	I 5484550	5919	1	0 0000000	2 3	813	I 9101828	9016	5 29	0 7234556
1 1	389	I 5898477	6236	1 21	0 0827854	2 4	849	I 9286662	9214	› 76	0 7604224
1 2	424	I 6276362	6511	1 44	0 1583624	2 ›	884	I 9463950	9402	6 25	0 7958800
1 25	442	I 6453650	6648	1 56	0 1938200	2 6	919	I 9634283	9586	6 76	0 8299466
1 3	459	I 6623984	6833	1 69	0 2278868	2 7	95›	I 9798188	9772	7 29	0 8627276
1 4	494	I 6945830	7028	1 96	0 2922560	2 7›	972	I 9877877	9859	7 56	0 8786674
1 ›	530	I 7245463	7286	2 2›	0 3521826	2 8	990	I 9956130	9949	7 84	0 8943160
1 6	566	I 752›750	7524	2 56	0 4082400	2 9	1 02›	0 0108›30	1 0124	8 41	0 9247960
1 7	601	I 7789039	7752	2 89	0 4608978	3	1 061	0 0255763	1 0301	9	0 9›42426

PART II.

TABLES FOR THE SOLUTION

OF

GANGUILLET AND KUTTER'S FORMULA,

where

$$v = \frac{n + \left(a + \frac{m}{S}\right)^{l}}{\sqrt{R} + \left(a + \frac{m}{S}\right)n} R \sqrt{S}$$

and $Q = Av$

FOR SPECIAL VALUES OF (n) NOT CONTEMPLATED IN PART I.

TABLE XXV—COLLECTION OF USEFUL QUANTITIES WITH LOGARITHMS

CONSTANTS—GANGUILLET AND KUTTER'S FORMULA		
	LENGTH	$\log_{10}$ unity
a	41 6004676	1 6197242
n	0 0028070	3 4483281
$l = \sqrt{3\ 280899}$	1 811320 feet	0 2079964
π ratio of circumference of circle to its diameter	3 1415926 36	0 4971499
1 foot	0 304794 metre	1 4840071
1 mile	1609 3123 metres	3 2066403
1 metre	3 280899 feet (English)	0 5159929
	AREA	
1 square foot	0 0928037 square metre	$\bar{2}$ 9680142
1 square metre	10 764300 square feet	1 0319858
	VOLUME	
1 cubic foot	0 0283193 cubic metre	2 4 20213
	6 23210 British imperial gallons	0 7946344
1 British imp l gallon	0 16046 cubic foot	1 20 36054
	0 004543 cubic metre	3 6 3868
1 cubic metre	35 316 85 cubic feet	1 5479787
	220 0976 British imperial gallons	2 3426132
	WATER	
	Weights of Cata ic Measures	
1 cubic foot	62 425 pounds	1 7953 03
	28 31 3 kilogra s	1 4 20213
1 British imp l gallon	10 0165 poun ls	1 0007208
	4 43 kilograms	0 6 3868
1 cubic metre	2204 672 poun ls	3 3433340
	Measures of Certain Weights	
1 poun l	0 016013 cubic foot	2 2046447
	0 003834 British imperial gallon	2 5952732
	0 0004 353 metre	4 6 66660
1 kilogram	0 03 3166 cubic foot	2 4 5187
	0 220066 British imperial gallon	1 3426132
	0 001 cubic metre	3 0000000
	Velocity of—	
g accelerating force of gravity (latitude of London)	32 19078 feet per second	1 5077315
$2g$ ditto ditto	64 38156	1 8087615
q ditto ditto Paris	32 182	1 5076204
$2q$ ditto ditto	64 36510	1 8086504
g ditto, ditto New York	32 1 94	1 5073086
$2g$ ditto ditto	64 31890	1 8083386
1 foot per second	0 681818 mile per hour	1 8336687
1 mile per hour	1 466666 feet per second	0 1663313
1 metre per second	3 280899 feet per second	0 5159929
	Discharge of—	
1 cubic foot per second	0 0283193 cubic metre per second	1 4520213
	6 23210 British imp l gallons per second	0 7946346
1 B imp l gallon per sec	0 004 34 cubic metre	$\bar{3}$ 6573868
	0 16046 cubic foot	1 2053654
1 cubic metre per sec	35 31658 cubic feet	1 5479787
	220 0976 British imp l gallons	2 3426132

TABLE XXVI.—THE FOLLOWING TABLE, GIVING VALUES OF (a) FOR DIFFERENT SURFACES EXPOSED TO THE FLOW OF WATER, IS TAKEN FROM FLYNN. THE DIMENSIONS ARE IN FEET.

R = HYDRAULIC MEAN DEPTH IN FEET.

S = SINE OF SLOPE.

No.	Nature of Plane.	R in feet.	S.	Breadth of water surface in feet.	Depth in feet.	a
24	Carefully planed plank	0·07	0·0015922	0·328	0·11	0·0096
23	" " "	0·05	0·0152570	0·328	0·079	0·0087
24	Inverted, semicircular	0·82	0·0011213	3·28	1·47	0·01005
	" rectangular	0·49	0·0005060	5·9	0·59	0·01010
	" with rounded ends, semicircular.....	0·85	0·0013502	3·28	1·61	0·01113
26	Plank, semicircular.....	0·91	0·0015227	3·6	1·61	0·01195
21	" trapezoidal.....	0·82	0·0015213	4·6	1·21	0·01255
	" "	0·65	0·0015731	4·36	0·98	0·01190
	" triangular, 45	0·65	0·0014655	4·36	1·87	0·0119
	" rectangular.....	0·65	0·0022156	6·5	0·85	0·013
	" "	0·52	0·0015889	6·5	0·62	0·0119
	" "	0·46	0·0051629	6·5	0·52	0·0115
	" "	0·72	0·0011678	6·5	0·91	0·0129
	" "	0·46	0·0058744	6·5	0·55	0·0117
	" "	0·42	0·0083805	6·5	0·49	0·0111
	" "	0·65	0·0045988	3·9	0·91	0·0111
		0·49	0·0042731	2·6	0·82	0·0111
		0·32	0·0059829	1·6	0·62	0·0111
	RAMMED GRAVEL :—					
27	½ to ¾ inch thick, semicircular	0·75	0·0013639	3·28	1·31	0·0163
4	" " " rectangular	0·65	0·0049736	6·0	0·85	0·0170
	RATTENS PLACED :—					
12	½-inch apart, rectangular	0·75	0·0011678	6·4	1·01	0·0149
13	" " "	0·55	0·0059661	6·4	0·65	0·0147
14	" " "	0·49	0·0088618	6·4	0·59	0·0149
15	2 inches " "	0·95	0·0011678	6·4	1·31	0·0208
16	" " "	0·69	0·0059976	6·4	0·88	0·0211
17		0·63	0·088618	6·4	0·78	0·0215
1·2	Ashlar, rectangular.....	1·77	0·0008100	8·5	3·0	0·0133
3	Brickwork, rectangular	0·55	0·030250	3·0	0·65	0·0129
39	Ashlar	0·59	0·0081	3·9	0·85	0·0129
	RUBBLE :—					
32	Rather damaged, rectangular	0·52	0·10076	5·9	0·63	0·0167
33	" " "	0·65	0·036856	5·9	0·88	0·0170
1·4	" " new, "	0·63	0·060	3·28	0·95	0·0180
1·3	" " " "	0·72	0·029	3·28	1·18	0·0181
1·6	" " " "	0·82	0·011	3·28	1·54	0·0182
1·5	" " " "	0·88	0·0122	3·28	1·60	0·0192
44	With deposits on the bed, rectangular	1·47	0·00032	6·56	2·62	0·0204
46	With deposits on the bed, rectangular	1·31	0·00032	6·56	2·29	0·0210
35	Damaged rubble, trapezoidal...	1·21	0·014221	4·9	2·29	0·0220

TABLE XXVI—*continued*

No	Series of Basin	R in feet	S	Breadth of water surface in feet	Depth in feet	n
	OTHER OBSERVATIONS —					
	Gotenbachschale, new rubble semi circular	0 32	0 014	5 ›	0 39	0 014 ›
	Grumbachschale, semi circular damaged	0 46	0 09527	8 ›	0 82	0 017
	Gerbachschale semi circular, much damaged	0 19	0 168	3 7	0 29	0 018 ›
	Alpbachschale semi-circular much damaged	0 72	0 0274	8 2	1 18	0 0230
	Marseilles Canal	2 87	0 00043	19 6	4 4	0 0244
	Jard Canal	1 37	0 0004	19 6	4 4	0 025 ›
	Chesapeake Ohio Canal	3 7	0 0006 38	22 6	7 3	0 0330
	Canal in England	2 43	0 000063	17 7	3 9	0 0184
	Lanter Canal at Newbury	1 81	0 000064	29 5	1 8	0 0262
	Pannerden Canal, in Holland	10 2	0 000224	328 0	9 8	0 0254
	Canal of Marmels	2 31	0 000 ›	26 2	2 6	0 0301
	Linth Canal	7 8	0 00034	1230	10 8	0 0222
	Hubengruben	0 6	0 0013	4 8	0 8	0 0237
	Hockenbach	0 87	0 000787	11 1	1 1	0 0243
	Speyerbach	1 46	0 000667	16 4	1 3	0 0260
	Mississippi	63 6	0 000667	2493 0	164	0 0270
	Bayou Plaquemine	16 8	0 00017	27 ›	2 › 6	0 0294
	Bayou La Fourche	13 1	0 0004	220	23 6	0 0200
	Ohio Point Pleasant	6 7	0 000093	1066	7 9	0 0210
		9	0 00013	239	14 8	0 0228
			0 00001 ›	886	21 0	0 025 2
			0 000014	1214	13 7	0 0262
	Weser	3 3	0 0002	334	3 8	0 0232
			0 00031	31 ›	4 3 6	0 028 ›
			0 0001 ›	1312	14 7	0 0243
			0 000137			0 025
	Seine, at Poissy	1 3 4	0 00007			0 028
	Saone at Raconnay	11 8	0 00004			0 026
	Rhine	3 2	0 0001			0 028
	CHANNELS OBSTRUCTED BY *DETRITUS* —					
	Rhine, at Speyer	9 7	0 000112	1440	9 7	0 026
	Rhine at Germersheim	10 8	0 000247	748		0 0227
	Rhine at Basle	6 9	0 001218	660	9 1	0 03
	Lech	3 1	0 0011 ›	1 › 7	3 8	0 022
	Saalach	1 4	0 0011	68	2 1	0 027
	Salzach	4 1	0 0012	38	11 8	0 028
	Issar	3 3	0 002 ›	164	4 4	0 030 ›
	Escher Canal	4 0	0 003	72	4 3	0 03
	Plessur	3 ›	0 0090 ›	42	4 6	0 027
	Rhine at Rhinewald	7 3	0 0142	14	99	0 031
	Mosa, at Misox	1 2	0 01187	13	1 3	0 031
	Rhine at Dornbeschgerthal	1 9	0 007 ›	16	2 4	0 03 ›
	Simme, at Leuk	1 6	0 010 ›			0 0345

TABLE XXVII.—VARIATIONS IN VALUE OF (n) (MAXIMUM AND MINIMUM).

Open Channels.		S		n	
Material.	Form.	(Relative values of.)		Min.	Max.
Pure cement	Semi-circular	·0015		·0101	·0104
2 p.c. to 1 fine sand	Ditto	·0015		·0108	·0114
Pure cement	Rectangular	·0019		·0096	·0107
Ditto	Arched invert and curved sides	·00016		·0111	·0114
Planed boards	Semi-circular	·0015		·0117	·0121
Carefully planed boards	Rectangular	·0152	·0017	·0084	·0097
Unplaned boards	Rectangular	·00824	·0015	·0104	·0132
Ditto	Triangular	·0019		·0118	·0124
Ashlar or neatly-jointed brickwork	Usual forms of aqueducts	·00002	·00028	·0103	·0211
Pebbles held in place by cement	Semi-circular	·0015		·0159	·0171
Ditto	Rectangular	·0019		·0170	·0215
Rubble masonry	Rectangular and semi-circular	·0016	·0009	·0138	·0385
Earth with masonry side walls	Rectangular and trapezoidal	·00003	·0022	·0137	·0560
Small rivers and canals	Regular	·0037	·00015	·0106	·0299
Rivers and canals	Irregular	·00011	·0222	·0194	·0550
Pipes under Pressure.					
Material.					
New lead		·3163	·0008	·0067	·0090
Earthenware		·0025		·0111	
Wrought iron		·3055	·0008	·0067	·0160
Ditto galvanized		·0076	·1130	·0077	·0082
New cast iron		·00001	·00094	·0080	·0134
Ditto force main		·00088	·00046	·0110	·0132
Old cast iron		·00025	·03239	·0095	·0292
Ditto force main		·00922	·00105	·0149	·0342
Brickwork (inverted syphon)		·00051	·00007	·0138	·0199

TABLE XXVIII.—VARIATIONS IN VALUE OF (n) (AVERAGE) ACCORDING TO ALBERT WOLLHEIM, A.M.I.C.E.

Material of Sewer.	Condition of Surface.			
	Perfect.	Good.	Fair.	Bad.
Glazed stoneware pipe	·010	·011	·013	·015
Brickwork, ordinary	·012	·013	·015	·017
Ditto, glazed	·011	·012	·013	·014
Rendering, cement mortar	·011	·012	·013	·015
Ditto, neat cement	·010	·011	·012	·013
Ashlar, dressed	·013	·014	·015	·017
Iron (cast), uncoated	·012	·013	·014	·015
Ditto (wrought) and steel	·011	·012	·013	·014

TABLE XXIX.—VALUES OF $\left(\frac{l}{n}\right)$, FROM $n = 0\,0070$ TO $n = 0\,050$

n	$\frac{l}{n}$	n	$\frac{l}{n}$
0 0070	258 76071	0 0200	90 ›662›
0 0075	241 ›1333	0 0205	88 3›731
0 0080	226 41 ›62	0 0210	86 25357
0 0085	213 09706	0·0215	84 24767
0 0090	201 25833	0 0220	82 38235
0 0095	190 66 ›79	0 022›	80 ›0333
0 0100	181 132›0	0 0230	78 75326
0 0105	172 50714	0 0240	74 47188
0 0110	164 66 ›91	0 0250	72 43300
0 0115	157 50› 2	0 026 0	69 66634
0 0120	150 94375	0 0270	67 08611
0 0125	144 90000	0 0275	6› 86636
0 0130	139 33269	0·0280	64 69018
0 0135	134 17225	0·0290	62 4›918
0 0140	129 38036	0 0300	60 37750
0 0145	124 91862	0·0320	56 60391
0 0150	120 75500	0 0340	3 27426
0 0155	116 8›967	0·03›0	›1 7›214
0·0160	113 20781	0·0360	›0 31458
0 0165	109 77727	0 0380	47 66644
0 0170	106 54853	0·0400	45 28313
0 0175	103 50428	0 0420	43 12679
0 0180	100 62917	0 0444	41 16636
0 0185	97 90946	0·0460	39 37763
0 0190	95 33289	0·0480	37 73›94
0 0195	92 86846	0 0›00	36 22650

TABLE XXIX, page 217.—The following corrections in above Table should be noted.

Line 6.—(n) *should read* "0 0095," *and not* "0 0195."

Line 23 columns 3 and 4.—

(n) *should read* "0 0440," *and not* "0 0444."

$\left(\frac{l}{n}\right)$ " " "41 16638," " " "41·16636."

TABLE XXX.—TABLE OF VALUES OF $\sqrt{S}$, LOG. $\sqrt{S}$, AND $\left(a + \frac{m}{S}\right)$ FOR OPEN AND CLOSED CHANNELS, FOR VARIOUS INCLINATIONS.

Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a + \frac{m}{S}$	Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{s}$	log. $\sqrt{s}$	$a + \frac{m}{s}$
1	5280·	1·0	0·0000000	41·66328	77	68·57	·113961	1·0567546	41·87665
2	2640·	·707106	1·8494850	41·66608	78	67·69	·113228	1·0539527	41·87945
3	1760·	·577350	1·7611391	41·66889	79	66·84	·112509	1·0511865	41·88226
4	1320·	·5	1·6989700	41·67169	80	66·	·111803	1·0484550	41·88507
5	1056·	·447214	1·6505150	41·67451	81	65·18	·111111	1·0457575	41·88788
6	880·	·408248	1·6109214	41·67731	82	64·39	·110431	1·0430931	41·89068
7	754·3	·377978	1·5774510	41·68013	83	63·62	·109761	1·0404610	41·89349
8	660·	·353553	1·5484550	41·68293	84	62·80	·109109	1·0378604	41·89630
9	586·7	·333333	1·5228787	41·68574	85	62·12	·108465	1·0352905	41·89911
10	528·	·316228	1·5000000	41·68851	86	61·40	·107833	1·0327508	41·90191
11	480·	·301511	1·4793037	41·69135	87	60·69	·107211	1·0302401	41·90472
12	440·	·288675	1·4601094	41·69416	88	60·	·106600	1·0277587	41·90753
13	406·2	·277350	1·4430283	41·69697	89	59·32	·106000	1·0253050	41·91034
14	377·1	·267261	1·4269360	41·69977	90	58·66	·105409	1·0228787	41·91314
15	352·	·258199	1·4119544	41·70258	91	59·02	·104828	1·0204793	41·91595
16	330·	·25	1·3979400	41·70538	92	57·39	·104257	1·0181061	41·91870
17	310·6	·242536	1·3847755	41·70820	93	56·78	·103695	1·0157585	41·92157
18	293·3	·235702	1·3723687	41·71100	94	56·17	·103142	1·0134361	41·92437
19	277·9	·229416	1·3606232	41·71381	95	55·58	·102598	1·0111382	41·92718
20	264·	·223607	1·3491850	41·71662	96	55·	·102062	1·0088644	41·92999
21	251·4	·218218	1·3388901	41·71943	97	54·43	·101535	1·0066141	41·93280
22	240·	·213200	1·3287887	41·72223	98	53·88	·101015	1·0043870	41·93560
23	229·6	·208514	1·3191361	41·72504	99	53·34	·100501	1·0021821	41·93841
24	220·	·204124	1·3098944	41·72785	100	52·8	·1	1·0000000	41·94122
25	211·2	·2	1·3010300	41·73066	101	52·28	·099501	2·9978393	41·94403
26	203·1	·196116	1·2925133	41·73346	102	51·76	·099015	2·9956999	41·94683
27	195·6	·192450	1·2843181	41·73627	103	51·26	·098533	2·9935814	41·94964
28	188·6	·188982	1·2764210	41·73908	104	50·77	·098058	2·9914833	41·95245
29	182·1	·185695	1·2688010	41·74189	105	50·29	·097590	2·9894054	41·95526
30	176·	·182574	1·2614394	41·74469	106	49·81	·097129	2·9873471	41·95806
31	170·3	·179605	1·2543191	41·74750	107	49·35	·096674	2·9853081	41·96087
32	165·	·176777	1·2474250	41·75031	108	48·89	·096225	2·9832881	41·96368
33	160·	·174077	1·2407430	41·75312	109	48·44	·095783	2·9812868	41·96649
34	155·3	·171499	1·2342605	41·75592	110	48·	·095346	2·9793037	41·96929
35	150·9	·169031	1·2279660	41·75873	111	47·57	·094916	2·9773385	41·97210

36	146 7		1 2218487	41 76154	112	47 14	094491		41 97491
37	142 7		1 2158991	41 76435	113	46 72	094072		41 97772
38	138 9		1 2101082	41 76715	114	4 31	093659		41 98052
39	13 4		1 2044677	41 76996	115	45 91	093250		41 98333
40	132		1 1989700	41 77277	116	45 52	092848		41 98614
41	128 8		1 1936081	41 77558	117	45 13	092450		41 98895
42	125 7		1 1883754	41 77838	118	44 75	092057		41 99175
43	122 8		1 1832657	41 78119	119	44 37	091669		41 99456
44	120		1 1782737	41 78400	120	44	091287		41 99737
45	117 3		1 1733937	41 78681	121	43 64	090909		42 00018
46	114 8		1 1686211	41 78961	122	43 28	090536		42 00298
47	112 3		1 1639511	41 79242	123	42 93	090167		42 00579
48	110		1 1593794	41 79523	124	42 58	089803		42 00860
49	107 8		1 1549020	41 79804	125	42 24	089442		42 01141
50	105 6		1 1505150	41 80084	126	41 91	089087		42 01421
51	103 5		1 1462149	41 80365	127	41 58	088736		42 01702
52	101 5		1 1419983	41 80646	128	41 25	088388		42 01983
53	9 62		1 1378621	41 80927	129	40 93	088045		42 02264
54	97 78		1 1338031	41 81207	130	40 62	087706		42 02544
55	96		1 1298187	41 81488	131	40 31	087370		42 02825
56	94 29		1 1259060	41 81769	132	40	087039		42 03106
57	92 6		1 1220626	41 82050	133	39 70	086711		42 03387
58	91 03		1 1182860	41 82330	134	39 40	086387		42 03667
59	89 49		1 1145740	41 82611	135	39 11	086066		42 03948
60	88		1 1109244	41 82892	136	38 82	085749		42 04229
61	86 56		1 1073351	41 83173	137	38 54	085436		42 04510
62	8 16		1 1038042	41 83453	138	38 26	085126		42 04790
63	83 81		1 1003297	41 83734	139	37 98	084819		42 05071
64	82 50		1 0969100	41 84015	140	37 71	084516		42 05352
65	81 25		1 0935433	41 84296	141	37 45	084215		42 05633
66	80		1 0902280	41 84576	142	37 18	083918		42 05913
67	78 81		1 0869626	41 84857	143	36 92	083624		42 06194
68	77 6		1 0837457	41 85138	144	36 67	083333		42 06475
69	76 52		1 0805765	41 85419	145	36 41	083046		42 06756
70	75 43		1 0774540	41 85699	146	36 16	082760		42 07036
71	74 36		1 0743708	41 85980	147	35 92	082479		42 07317
72	73 33		1 0713337	41 86261	148	35 68	082199		42 07598
73	72 33		1 0683386	41 86542	149	35 44	081923		42 07879
74	71 35		1 0653841	41 86822	150	35 20	081650		42 08159
75	70 40		1 0624694	41 87103	151	34 97	081379		42 08440
76	69 47		1 0595932	41 87384	152	34 74	081111		42 08721

TABLE XXX.—TABLE OF VALUES OF $\sqrt{S}$, LOG. $\sqrt{S}$, AND $\left(a + \frac{m}{S}\right)$ FOR OPEN AND CLOSED CHANNELS, FOR VARIOUS INCLINATIONS.

Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a + \frac{m}{S}$	Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a + \frac{m}{S}$
1	5280·	1·0	0·0000000	41·66328	77	68·57	·113961	1·0567546	41·87665
2	2640·	·707106	1·8494850	41·66608	78	67·69	·113228	1·0539527	41·87945
3	1760·	·577350	1·7614391	41·66889	79	66·84	·112509	1·0511865	41·88226
4	1320·	·5	1·6989700	41·67169	80	66·	·111803	1·0484550	41·88507
5	1056·	·447214	1·6505150	41·67451	81	65·18	·111111	1·0457575	41·88788
6	880·	·408248	1·6109241	41·67731	82	64·39	·110431	1·0430931	41·89068
7	754·3	·377978	1·5774510	41·68013	83	63·62	·109764	1·0404610	41·89349
8	660·	·353553	1·5484550	41·68293	84	62·80	·109109	1·0378604	41·89630
9	586·7	·333333	1·5228787	41·68571	85	62·12	·108465	1·0352905	41·89911
10	528·	·316228	1·5000000	41·68851	86	61·40	·107833	1·0327508	41·90191
11	480·	·301511	1·4793037	41·69135	87	60·69	·107211	1·0302401	41·90472
12	440·	·288675	1·1601094	41·69116	88	60·	·106600	1·0277587	41·90753
13	406·2	·277350	1·4430283	41·69697	89	59·32	·106000	1·0253050	41·91034
14	377·1	·267261	1·4269360	41·69977	90	58·66	·105409	1·0228787	41·91314
15	352·	·258199	1·4119544	41·70258	91	59·02	·104828	1·0204793	41·91595
16	330·	·25	1·3979400	41·70538	92	57·39	·104257	1·0181061	41·91870
17	310·6	·242536	1·3847755	41·70820	93	56·78	·103695	1·0157585	41·92157
18	293·3	·235702	1·3723637	41·71100	94	56·17	·103142	1·0134361	41·92437
19	277·9	·229416	1·3606232	41·71381	95	55·58	·102598	1·0111382	41·92718
20	264·	·223607	1·3494850	41·71662	96	55·	·102062	1·0088644	41·92999
21	251·4	·218218	1·3388901	41·71943	97	54·43	·101535	1·0066141	41·93280
22	240·	·213200	1·3287887	41·72223	98	53·88	·101015	1·0043870	41·93560
23	229·6	·208514	1·3191361	41·72501	99	53·31	·100501	1·0021824	41·93841
24	220·	·204124	1·3098944	41·72785	100	52·8	·1	1·0000000	41·94122
25	211·2	·2	1·3010300	41·73066	101	52·28	·099501	2·9978393	41·94403
26	203·1	·196116	1·2925133	41·73346	102	51·76	·099015	2·9956999	41·94683
27	195·6	·192150	1·2843181	41·73627	103	51·26	·098533	2·9935814	41·94964
28	188·6	·188982	1·2764210	41·73908	104	50·77	·098058	2·9914833	41·95245
29	182·1	·185695	1·2688010	41·74189	105	50·29	·097590	2·9894051	41·95526
30	176·	·182574	1·2614394	41·74469	106	49·81	·097129	2·9873471	41·95806
31	170·3	·179605	1·2543191	41·74750	107	49·35	·096674	2·9853081	41·96087
32	165·	·176777	1·2474250	41·75031	108	48·89	·096225	2·9832881	41·96368
33	160·	·174077	1·2407430	41·75312	109	48·44	·095783	2·9812868	41·96649
34	155·3	·171499	1·2342605	41·75592	110	48·	·095346	2·9793037	41·96929
35	150·9	·169031	1·2279660	41·75873	111	47·57	·094916	2·9773385	41·97210

36			1	41	112	47 14			
37			1	41	113	46 72			
38			1	41	114	4[illegible] 31			
39			1	41	115	45 91			
40			1 1	41	116	4[illegible] 52			
41			1 1	41	117	45 13			
42			1 1	41	118	44 75	(		
43			1 1	41	119	44 37	(		
44			1 1	41	120	44	(		
45			1 1	41	121	43 64	(		
46			1 1	41	122	43 28	(		
47			1 1	41	123	42 93	(		
48			1 1	41	124	42 58	(		
49			1 1	41	125	42 24	(		
50			1 1	41	126	41 91	(		
51			1 1	41	127	41 58	(		
52			1 1	41	128	41 25	(		
53			1 1	41	129	40 93	(		
54			1 1	41	130	40 62	(		
55			1 1	41	131	40 31	(		
56			1 1	41	132	40	(		
57			1 1	41	133	39 70	(		
58			1 1	41	134	39 40	(		
59			1 1	41	135	39 11	(		
60			1 1	41	136	38 82	(		
61			1 1	41	137	38 54	(		
62			1 1	41	138	38 26	(		
63			1 1	41	139	37 98	(		4
64			1 0	41	140	37 71	(		4
65			1 0	41	141	37 45	(		4
66			1 0	41	142	37 18	(		4
67			1 0	41	143	36 92	0		4
68			1 0	41	144	36 67	0		4
69			1 0	41	145	36 41	0		4
70			1 0	41	146	36 16	0		4
71			1 0	41	147	3[illegible] 92	0		4
72			1 0	41	148	3[illegible] 68	0		4
73			1 0	41	149	3[illegible] 44	0		4
74			1 0	41	150	3[illegible] 20	0		4
75			1 0	41	151	34 97	0		4
76	63 47	114 08	1 0	41	152	34 74	0		4

TABLE XXX.—*continued.*

Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{m}{S}$	Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{m}{S}$
153	34·51	·080845	2·9076543	42·09002	350	15·09	·053452	2·7279660	42·64309
154	34·29	·080582	2·90.52396	42·09282	355	15·87	·053074	2·7248858	42·65713
155	34·06	·080322	2·9048342	42·09563	360	14·67	·052705	2·7218487	42·67117
156	33·85	·080065	2·9034377	42·09844	365	14·47	·052342	2·7188535	42·68521
157	33·63	·079809	2·9020502	42·10125	370	14·27	·051988	2·7158991	42·69924
158	33·42	·079556	2·9006715	42·10105	375	14·08	·051640	2·7129844	42 71328
159	33·21	·079305	2·8993014	42·10686	380	13·90	·051299	2·7101082	42·72732
160	33·	·079057	2·8979400	42·10967	385	13·71	·050965	2·7072696	42·74136
161	32·8	·078811	2·8965871	42·11248	390	13·54	·050637	2·7044677	42·75539
162	32·59	·078568	2·8952425	42·11528	395	13·37	·050315	2·7017015	42·76943
163	32·39	·078326	2·8939062	42·11809	400	13·20	·050000	2·6989700	42·78347
164	32·20	·078087	2·8925781	42·12090	405	13·04	·049690	2·6962725	42·79751
165	32·	·077850	2·8912580	42·12371	410	12·88	·049387	2·6936081	42·81154
166	31·81	·077615	2·8899450	42·12651	415	12·72	·049088	2·6909760	42·82551
167	31·62	·077382	2·8886418	42·12933	420	12·57	·048795	2·6883754	42·83962
168	31·43	·077152	2·8873454	42·13213	425	12·42	·048507	2·6858055	42·85366
169	31·24	·076923	2·8860566	42·13494	430	12·28	·048224	2·6832658	42·86769
170	31·06	·076697	2·8847755	42·13774	435	12·14	·047946	2·6807554	42·88173
171	30·88	·076472	2·8835019	42·14056	440	12·	·047673	2·6782737	42·89577
172	30·7	·076249	2·8822358	42·14336	445	11·87	·047404	2·6758200	42·90981
173	30·52	·076029	2·8809769	42·14617	450	11·73	·017140	2·6733937	42·92381
174	30·34	·075810	2·8797254	42·14897	455	11·60	·016880	2·6709943	42·93788
175	30·17	·075593	2·8784810	42·15178	460	11·48	·046625	2·6686211	42·95192
176	30·	·075378	2·8772437	42·15459	465	11·35	·046374	2·6662735	42·96596
177	29·83	·075164	2·8760134	42·15740	470	11·24	·046126	2·6639511	42·97999
178	29·66	·074953	2·8747900	42·16020	475	11·12	·045883	2·6616532	42·99403
179	29·50	·074744	2·8735735	42·16301	480	11·	·045644	2·6593794	43·00807
180	29·33	·074536	2·8723637	42·16582	485	10·89	·045407	2·6571291	43·02211
181	29·17	·074329	2·8711607	42·16863	490	10·78	·045175	2·6549020	43·03614
182	29·01	·074125	2·8699643	42·17143	495	10·67	·044947	2·6526974	43·05018
183	28·85	·073922	2·8687745	42·17424	500	10·56	·044721	2·6505150	43·06422
184	28·70	·073721	2·8675911	42·17705	505	10·46	·044499	2·6483543	43·07826
185	28·54	·073521	2·8664141	42·17986	510	10·35	·044281	2·6462149	43·09229
186	28·39	·073324	2·8652435	42·18266	515	10·25	·044065	2·6440964	43·10633
187	28·24	·073127	2·8640792	42·18547	520	10·15	·043853	2·6419983	43·12037
188	28·09	·072932	2·8629211	42·18828	525	10·06	·043644	2·6399203	43·13441

189	27 04		2	42 19109	530	9 962	(		
190	27 73		2	42 19380	535	9 870	(		
191	27 44		2	42 19670	540	9 778	(		
192	27 50		-	42 19951	545	9 188	(		
193	27 36		-	42 20232	550	9 600	(		
194	27 22		2	42 20512	[illegible]	9 13	(		
195	27 09		2	42 20793	560	9 428	(		
196	26 94		2	42 21074	6[illegible]	9 345	(		
197	26 80		2	42 21355	570	9 263	(		
198	26 67		2	42 21635	575	9 182	(		
199	26 53		2	42 21916	580	9 103	(		
200	26 40		2	42 22197	585	9 026	(		
205	25 76	'	2	42 23601	590	8 949	(		
210	25 14	(	2	42 25004	595	8 874	(		
215	24 56		2	42 26408	600	8 800	(		
220	24		2	42 27812	605	8 727	(		
225	23 47		2	42 29216	610	8 6 6	(		
230	22 96	(	2	42 30619	615	8 585	(		
235	22 48	(	2	42 32023	620	8 516	(		
240	22	(	2	42 33427	625	8 448	(		
245	21 55	(	2	42 34831	630	8 338	(		
250	21 12	(	2	42 36234	635	8 317	(		
255	20 71	(	2	42 37638	640	8 250	(		
260	20 31	(	7	42 39042	645	8 186	(		
265	19 92	(	2	42 40446	6 0	8 123	(		
270	19 56	(	2	42 41849	655	8 061	(		
275	19 20	(	-	42 43253	660	8	(		
280	18 86	(	2	42 44657	665	7 940	(		
285	18 53	(	7	42 46061	670	7 881	(		
290	18 20	(	-	42 47464	675	7 822	(	-	
295	17 90	(	2	42 48868	680	7 765	(	4	
300	17 60	(	2	42 50272	685	7 708	0	4	
305	17 31	(	2	42 51676	690	7 652	0	4	
310	17 03	(	2	42 53079	695	7 597	0	4	
315	16 76	(	5	42 54483	700	7 543	0	4	
320	16 50	(	[illegible]	42 55887	705	7 490	0	4	
325	16 25	(	2 7440 83	42 57291	710	7 437	0	4	
330	16	(	2 7407430	42 58694	715	7 385	0	4	
335	15 76	(	2 73747 6	42 60098	720	7 333	0	4	
340	15 53	(	2 73420 5	42 61502	725	7 283	0	4	
345	15 30	(	2 73109 5	42 62906	730	7 233	0	4	

TABLE XXX.—*continued.*

Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{m}{S}$	Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{m}{S}$
735	7·184	·036885	2·5668563	43·72398	1120	1·714	·029881	2·4753910	11·80477
740	7·135	·036761	2·5653811	43·73802	1125	1·693	·029814	2·4744237	11·81891
745	7·087	·036637	2·5639219	43·75206	1130	1·673	·029748	2·4734608	11·83291
750	7·040	·036515	2·5624691	43·76609	1135	1·652	·029683	2·4725021	11·84698
755	6·993	·036394	2·5610265	43·78013	1140	1·632	·029617	2·4715476	11·86102
760	6·948	·036274	2·5595932	43·79417	1145	1·611	·029553	2·4705973	11·87505
765	6·902	·036155	2·5581693	43·80821	1150	1·591	·029488	2·4696511	11·88909
770	6·857	·036038	2·5567546	43·82224	1155	1·571	·029425	2·4687090	11·90313
775	6·812	·035921	2·5553491	43·83628	1160	1·552	·029361	2·4677710	11·91717
780	6·769	·035806	2·5539527	43·85032	1165	1·532	·029298	2·4668370	11·93121
785	6·726	·035691	2·5525652	43·86436	1170	1·513	·029235	2·4659071	11·94521
790	6·684	·035578	2·5511865	43·87839	1175	1·494	·029173	2·4649811	11·95928
795	6·642	·035466	2·5498164	43·89243	1180	1·475	·029111	2·4640590	11·97331
800	6·600	·035355	2·5484550	43·90647	1185	1·456	·029049	2·4631408	11·98736
805	6·559	·035245	2·5471021	43·92051	1190	1·437	·028988	2·4622265	45·00139
810	6·518	·035136	2·5457575	43·93454	1195	1·418	·028928	2·4613160	45·01543
815	6·478	·035028	2·5444212	43·94858	1200	1·400	·028868	2·4601094	45·02947
820	6·439	·034922	2·5430931	43·96262	1205	1·382	·028808	2·4595065	45·01351
825	6·400	·034816	2·5417730	43·97666	1210	1·361	·028689	2·1586073	45·05751
830	6·362	·034710	2·5404610	43·99069	1215	1·346	·028689	2·4577119	45·07158
835	6·324	·034606	2·5391568	44·00473	1220	1·328	·028630	2·4568201	45·08562
840	6·286	·034503	2·5378604	44·01877	1225	1·310	·028571	2·4559320	45·09966
845	6·248	·034401	2·5365716	44·03281	1230	1·293	·028513	2·4550471	45·11369
850	6·212	·034300	2·5352905	44·01684	1235	1·275	·028455	2·4541665	45·12773
855	6·175	·034199	2·5340169	44·06088	1240	1·258	·028398	2·4532892	45·14177
860	6·140	·034099	2·5327508	44·07492	1245	1·241	·028341	2·4521153	45·15511
865	6·104	·034001	2·5314919	44·08896	1250	1·224	·028284	2·4515450	45·16981
870	6·069	·033903	2·5302404	44·10299	1255	1·207	·028228	2·4506781	45·18388
875	6·034	·033806	2·5289960	44·11703	1260	1·190	·028172	2·4498147	45·19792
880	6·	·033710	2·5277587	44·13107	1265	1·174	·028116	2·4489547	45·21196
885	5.966	·033614	2·5265284	44·14511	1270	1·157	·028061	2·4480981	45·22599
890	5·932	·033520	2·5253050	44·15914	1275	1·141	·028006	2·4472449	45·24003
895	5·900	·033426	2·5240885	44·17318	1280	1·129	·027951	2·4463950	45·25407
900	5·867	·033333	2·5228787	44·18722	1285	1·109	·027896	2·4455484	45·26811
905	5·834	·033241	2·5216757	44·20126	1290	1·093	·027841	2·4447051	45·28214
910	5·802	·033108	2·5204793	44·21521	1295	1·077	·027789	2·4438651	15·29618

915	5 770		[illegible]	44 22933	1300	4 062	[illegible]	2 4	45 31022
920	5 739		[illegible]	44 24337	1305	4 046	[illegible]	2 4	45 32426
925	5 708		[illegible]	44 25741	1310	4 031	[illegible]	2 4	45 33829
930	5 677		[illegible]	44 27144	1315	4 015	[illegible]	2 4	45 35233
935	5 648		[illegible]	44 28548	1320	4	[illegible]	2 4	45 36637
940	5 617		[illegible]	44 29952	1325	3 985	[illegible]	2 4	45 38041
945	5 587		[illegible]	44 31356	1330	3 970	[illegible]	2 4	45 39444
950	5 558		[illegible]	44 32759	1335	3 955	[illegible]	2 4	45 40848
955	5 528		[illegible]	44 34163	1340	3 940	[illegible]	2 4	45 42252
960	5 500		[illegible]	44 35567	1345	3 926	[illegible]	2 4	45 43656
965	5 472		[illegible]	44 36971	1350	3 911	[illegible]	2 4	45 45059
970	5 434		[illegible]	44 38374	1355	3 897	[illegible]	2 4	45 46463
975	5 415		[illegible]	44 39778	1360	3 882	[illegible]	2 4	45 47867
980	5 398		[illegible]	44 41182	1365	3 868	[illegible]	2 4	45 49271
985	5 360		[illegible]	44 42585	1370	3 854	[illegible]	2 4	45 50674
990	5 333		[illegible]	44 43989	1375	3 840	[illegible]	2 4	45 52078
995	5 306		[illegible]	44 45393	1380	3 826	[illegible]	2 4	45 53482
1000	5 280		[illegible]	44 46797	1385	3 812	[illegible]	2 4	45 54886
1005	5 253		[illegible]	44 48201	1390	3 799	[illegible]	2 4	45 56289
1010	5 228		[illegible]	44 49604	1395	3 785	[illegible]	2 4	45 57693
1015	5 202		[illegible]	44 51008	1400	3 771	[illegible]	2 4	45 59097
1020	5 176		[illegible]	44 52412	1405	3 758	[illegible]	2 4	45 60501
1025	5 151		[illegible]	44 53816	1410	3 745	[illegible]	2 4	45 61904
1030	5 126		[illegible]	44 55219	1415	3 731	[illegible]	2 4	45 63308
1035	5 101		[illegible]	44 56623	1420	3 718	[illegible]	2 4	45 64712
1040	5 077		[illegible]	44 58027	1425	3 705	[illegible]	2 4	45 66116
1045	5 053		[illegible]	44 59431	1430	3 692	[illegible]	2 4	45 67519
1050	5 029		[illegible]	44 60834	1435	3 680	[illegible]	2 4	45 68923
1055	5 005		[illegible]	44 62238	1440	3 667	[illegible]	2 4	45 70327
1060	4 981		[illegible]	44 63642	1445	3 654	[illegible]	2 4	45 71731
1065	4 958		[illegible]	44 65046	1450	3 641	[illegible]	2 4	45 73134
1070	4 935		[illegible]	44 66449	1455	3 629	[illegible]	2 4	45 74538
1075	4 912		[illegible]	44 67853	1460	3 617	[illegible]	2 4	45 75942
1080	4 889		[illegible]	44 69257	1465	3 604	[illegible]	2 4	45 77346
1085	4 866		[illegible]	44 70661	1470	3 592	[illegible]	2 4	45 78749
1090	4 844		[illegible]	44 72064	1475	3 580	[illegible]	2 4	45 80153
1095	4 822		[illegible]	44 73468	1480	3 568	[illegible]	2 4	45 81557
1110	4 800		[illegible]	44 74872	1485	3 556	[illegible]	2 4	45 82961
1105	4 778		[illegible]	44 76276	1490	3 544	[illegible]	2 4	45 84364
1110	4 757		[illegible]	44 77679	1495	3 532	[illegible]	2 4	45 85768
1115	4 735		[illegible]	44 79083	1500	3 520	[illegible]	2 4	45 87172

TABLE XXX.—*continued.*

Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a + \frac{m}{S}$	Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a + \frac{m}{S}$
1505	3·508	·025777	2·4112317	45·88576	1890	2·791	·023002	2·3617691	46·96664
1510	3·497	·025734	2·4105115	45·89979	1895	2·786	·022972	2·3611954	46·98068
1515	3·485	·025691	2·4097937	45·91383	1900	2·779	·022942	2·3606232	46·99472
1520	3·474	·025649	2·4090782	45·92787	1905	2·772	·022911	2·3600525	47·00876
1525	3·462	·025607	2·4083651	45·94191	1910	2·764	·022881	2·3594833	47·02279
1530	3·451	·025566	2·4076543	45·95594	1915	2·757	·022852	2·3589156	47·03683
1535	3·440	·025524	2·4069458	45·96998	1920	2·750	·022822	2·3583494	47·05087
1540	3·429	·025482	2·4062396	45·98402	1925	2·743	·022792	2·3577846	47·06491
1545	3·417	·025441	2·4055358	45·99806	1930	2·736	·022763	2·3572213	47·07894
1550	3·407	·025400	2·4048342	46·01209	1935	2·729	·022733	2·3566595	47·09298
1555	3·396	·025359	2·4041348	46·02613	1940	2·722	·022701	2·3560991	47·10702
1560	3·385	·025318	2·4034377	46·04017	1945	2·715	·022675	2·3555402	47·12106
1565	3·374	·025278	2·4027428	46·05421	1950	2·708	·022646	2·3549827	47·13509
1570	3·363	·025238	2·4020502	46·06824	1955	2·701	·022616	2·3544266	47·14913
1575	3·352	·025198	2·4013597	46·08228	1960	2·691	·022588	2·3538720	47·16317
1580	3·342	·025158	2·4006715	46·09632	1965	2·687	·022559	2·3533187	47·17721
1585	3·331	·025118	2·3999854	46·11036	1970	2·680	·022530	2·3527669	47·19124
1590	3·321	·025078	2·3993014	46·12439	1975	2·673	·022502	2·3522164	47·20528
1595	3·310	·025039	2·3986197	46·13843	1980	2·667	·022473	2·3516674	47·21932
1600	3·300	·025000	2·3979400	46·15247	1985	2·660	·022445	2·3511197	47·23336
1605	3·290	·024961	2·3972625	46·16651	1990	2·653	·022417	2·3505735	47·24739
1610	3·280	·024922	2·3965871	46·18054	1995	2·647	·022388	2·3500285	47·26143
1615	3·260	·024884	2·3959137	46·19458	2000	2·640	·022361	2·3491850	47·27547
1620	3·259	·024845	2·3952425	46·20862	2005	2·633	·022333	2·3489428	47·28951
1625	3·249	·024807	2·3945733	46·22266	2010	2·627	·022305	2·3484020	47·30354
1630	3·239	·024769	2·3939062	46·23669	2015	2·620	·022277	2·3478625	47·31758
1635	3·229	·024731	2·3932411	46·25073	2020	2·614	·022250	2·3473243	47·33162
1640	3·220	·024693	2·3925781	46·26477	2025	2·607	·022222	2·3467875	47·34566
1645	3·210	·024656	2·3919170	46·27881	2030	2·601	·022195	2·3462520	47·35969
1650	3·200	·024618	2·3912580	46·29284	2035	2·595	·022168	2·3457178	47·37373
1655	3·190	·024581	2·3906010	46·30688	2040	2·588	·022140	2·3451849	47·38777
1660	3·181	·024544	2·3899460	46·32092	2045	2·582	·022113	2·3446533	47·40181
1665	3·171	·024507	2·3892929	46·33496	2050	2·576	·022086	2·3441231	47·41584
1670	3·162	·024470	2·3886418	46·34899	2055	2·569	·022059	2·3435941	47·42988
1675	3·152	·024434	2·3879926	46·36303	2060	2·563	·022033	2·3430664	47·44392
1680	3·143	·024398	2·3873454	46·37707	2065	2·557	·022005	2·3425400	47·45796

1685	3134			46 39117	2070	2 551				47 47199
1690	3124			46 40514	2075	2 540				47 48603
1695	3115			46 41918	2080	2 538				47 50007
1700	3106			46 43322	2085	2 532				47 51411
1705	3097			46 44726	2090	2 526				47 52814
1710	3008			46 46129	2095	2 520				47 54218
1715	3079			46 47533	2100	2 514				47 55622
1720	3070			46 48937	2105	2 508				47 57026
1725	3061			46 50341	2110	2 502				47 58429
1730	3052			46 51744	2115	2 496				47 59833
1735	3042			46 53148	2120	2 491				47 61237
1740	3033			46 54552	2125	2 485				47 62641
1745	3026			46 55956	2130	2 479				47 64044
1750	3017			46 57359	2135	2 473				47 65448
1755	3008			46 58763	2140	2 467				47 66852
1760	3			46 60167	2145	2 462				47 68256
1765	2992			46 61571	2150	2 456				47 69659
1770	2983			46 62974	2155	2 450				47 71063
1775	2975			46 64378	2160	2 444				47 72467
1780	2966			46 65782	2165	2 439				47 73871
1785	2958			46 67186	2170	2 433				47 75274
1790	2950			46 68589	2175	2 428				47 76678
1795	2942			46 69993	2180	2 422				47 78082
1800	2933			46 71397	2185	2 416				47 79486
1805	2925			46 72801	2190	2 411				47 80889
1810	2917			46 74204	2195	2 405				47 82293
1815	2909			46 75608	2200	2 400				47 83697
1820	2901			46 77012	2205	2 395				47 85101
1825	2893			46 78416	2210	2 389				47 86504
1830	2885			46 79819	2215	2 384				47 87908
1835	2877			46 81223	2220	2 378				47 89312
1840	2870			46 82627	2225	2 373				47 90716
1845	2862			46 84031	2230	2 368				47 92119
1850	2854			46 85434	2235	2 362				47 93523
1855	2847			46 86838	2240	2 357				47 94927
1860	2839			46 88242	2245	2 352				47 96331
1865	2831			46 89646	2250	2 347				47 97734
1870	2824			46 91049	2255	2 341				47 99138
1875	2816			46 92453	2260	2 336				48 00542
1880	2809			46 93857	2265	2 331				48 01946
1885	2801			46 95261	2270	2 326				48 03349

TABLE XXX.—*continued.*

Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{m}{S}$	Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{m}{S}$
2275	2·321	·020966	2·3215093	48·04753	2660	1·985	·019389	2·2875592	49·12827
2280	2·316	·020943	2·3210326	48·06157	2665	1·981	·019371	2·2871514	49·14246
2285	2·311	·020920	2·3205569	48·07561	2670	1·977	·019353	2·2867444	49·15649
2290	2·306	·020897	2·3200823	48·08964	2675	1·974	·019334	2·2863381	49·17053
2295	2·301	·020874	2·3196087	48·10368	2680	1·970	·019316	2·2859326	49·18457
2300	2·296	·020853	2·3191361	48·11772	2685	1·966	·019298	2·2855279	49·19861
2305	2·291	·020829	2·3186645	48·13176	2690	1·963	·019281	2·2851239	49·21264
2310	2·286	·020806	2·3181940	48·14579	2695	1·959	·019263	2·2847206	49·22668
2315	2·281	·020784	2·3177245	48·15983	2700	1·956	·019245	2·2843181	49·24072
2320	2·276	·020761	2·3172560	48·17387	2705	1·952	·019228	2·2839164	49·25476
2325	2·271	·020740	2·3167885	48·18791	2710	1·949	·019004	2·2835154	49·26879
2330	2·266	·020717	2·3163220	48·20194	2715	1·945	·019192	2·2831151	49·28283
2335	2·261	·020694	2·3158566	48·21598	2720	1·941	·019174	2·2827155	49·29687
2340	2·256	·020672	2·3153921	48·23012	2725	1·938	·019156	2·2823167	49·31091
2345	2·252	·020650	2·3149286	48·24406	2730	1·934	·019139	2·2819187	49·32494
2350	2·247	·020628	2·3144661	48·25809	2735	1·931	·019121	2·2815213	49·33898
2355	2·242	·020607	2·3140045	48·27213	2740	1·927	·019104	2·2811247	49·35302
2360	2·237	·020585	2·3135440	48·28617	2745	1·923	·019086	2·2807288	49·36706
2365	2·233	·020563	2·3130844	48·30021	2750	1·920	·019069	2·2803337	49·38109
2370	2·228	·020541	2·3126258	48·31424	2755	1·916	·019052	2·2799392	49·39513
2375	2·223	·020520	2·3121682	48·32828	2760	1·913	·019035	2·2795455	49·40917
2380	2·219	·020498	2·3117115	48·34232	2765	1·910	·019017	2·2791524	49·42321
2385	2·214	·020477	2·3112558	48·35636	2770	1·906	·019000	2·2787601	49·43724
2390	2·209	·020455	2·3108010	48·37039	2775	1·903	·018983	2·2783685	49·45128
2395	2·205	·020434	2·3103472	48·38443	2780	1·900	·018966	2·2779776	49·46532
2400	2·200	·020412	2·3098944	48·39847	2785	1·896	·018949	2·2775874	49·47936
2405	2·195	·020391	2·3094425	48·41251	2790	1·892	·018932	2·2771979	49·49339
2410	2·191	·020370	2·3089915	48·42654	2795	1·889	·018915	2·2768091	49·50743
2415	2·186	·020349	2·3085414	48·44058	2800	1·886	·018898	2·2764210	49·52147
2420	2·182	·020328	2·3080923	48·45462	2805	1·882	·018881	2·2760336	49·53551
2425	2·177	·020307	2·3076441	48·46866	2810	1·879	·018865	2·2756468	49·54954
2430	2·173	·020286	2·3071969	48·48269	2815	1·875	·018848	2·2752608	49·56358
2435	2·168	·020265	2·3067505	48·49673	2820	1·872	·018831	2·2748754	49·57762
2440	2·164	·020244	2·3063051	48·51077	2825	1·869	·018814	2·2744908	49·59166
2445	2·160	·020224	2·3058606	48·52481	2830	1·866	·018797	2·2741068	49·60569
2450	2·155	·020203	2·3054170	48·53884	2835	1·862	·018781	2·2737235	49·61973

2455	2 151		2	48 55288	2840	1 859	018764	2	49 63377
2460	2 146		2	48 56692	2845	1 856	018746	2	49 64781
2465	2 142		2	48 58096	2850	1 852	018731	2	49 66184
2470	2 138		2	48 59499	2855	1 849	018715	2	49 67588
2475	2 133		2	48 60903	2860	1 846	018699	2	49 68992
2480	2 129		2	48 62307	2865	1 843	018682	2	49 70396
2485	2 125		2	48 63711	2870	1 839	018666	2	49 71799
2490	2 120		2	48 65114	2875	1 836	018650	2	49 73203
2495	2 116		2	48 66518	2880	1 833	018634	2	49 74607
2500	2 112		2	48 67922	2885	1 830	018617	2	49 76011
2505	2 108		2	48 69326	2890	1 827	018602	2	49 77414
2510	2 104		2	48 70729	2895	1 824	018585	2	49 78818
2515	2 099		2	48 72133	2900	1 820	018569	2	49 80222
2520	2 095		2	48 73537	2905	1 817	018554	2	49 81626
2525	2 091		2	48 74941	2910	1 814	018537	2	49 83029
2530	2 087		2	48 76344	2915	1 811	018521	2	49 84433
2535	2 083		2	48 77748	2920	1 808	018506	2	49 85837
2540	2 079		2	48 79152	2925	1 805	018490	2	49 87241
2545	2 075		2	48 80566	2930	1 802	018474	2	49 88644
2550	2 071		2	48 81959	2935	1 799	018456	2	49·90048
2555	2 066		2	48 83363	2940	1 796	018442	2	49 91452
2560	2 063		2	48 84767	2945	1 793	018427	2	49 92856
2565	2 058		2	48 86171	2950	1 790	018414	2	49 94259
2570	2 054		2	48 87574	2955	1 787	018396	2	49 95663
2575	2 050		2	48 88978	2960	1 784	018380	2	49 97067
2580	2 047		2	48 90382	2965	1 781	018364	2	49 98471
2585	2 012		2	48 91786	2970	1 778	018349	2	49 99874
2590	2 039		2	48 93189	2975	1 775	018334	2	50 01278
2595	2 035		2	48 94593	2980	1 772	018319	2	50 02682
2600	2 031		2	48 95997	2985	1 769	018303	2	50 04086
2605	2 027		2	48 97401	2990	1 766	018288	2	50 05489
2610	2 023		2	48 98804	2995	1 763	018272	2	50 06893
2615	2 019		2	49 00208	3000	1 760	018257	2	50 08297
2620	2 015		2	49 01612	3010	1 754	018227	2	50 11104
2625	2 011		2	49 03016	3020	1 748	018197	2	50 13912
2630	2 008		2	49 04419	3030	1·742	018167	2	50 16719
2635	2 004		2	49 05823	3040	1 737	018137	2	50 19527
2640	2		2	49 07227	3050	1 731	018107	2	50 22334
2645	1 996		2	49 08631	3060	1 725	·018077	2	50 25142
2650	1 992		2	49 10034	3070	1 720	018048	2	50 27949
2655	1 989		2	49 11438	3080	1 715	018019	2	50 30757

TABLE XXX.—*continued.*

Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{m}{S}$	Sine of Inclination 1 over.	Fall in Feet per Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{m}{S}$
3090	1·709	·017989	2·2550208	50·33564	4520	1·168	·014874	2·1724308	54·35037
3100	1·703	·017960	2·2543192	50·36372	4540	1·163	·014841	2·1714721	54·40652
3110	1·698	·017932	2·2536198	50·39179	4560	1·158	·014808	2·1705176	54·46267
3120	1·692	·017903	2·2529227	50·41987	4580	1·153	·014776	2·1695673	54·51882
3130	1·687	·017874	2·2522278	50·44794	4600	1·148	·014744	2·1686211	54·57497
3140	1·682	·017845	2·2515352	50·47602	4620	1·143	·014712	2·1676790	54·63112
3150	1·676	·017817	2·2508447	50·50409	4640	1·138	·014681	2·1667410	54·68727
3160	1·671	·017789	2·2501565	50·53217	4660	1·133	·014649	2·1658070	54·74342
3170	1·666	·017761	2·2494704	50·56024	4680	1·128	·014617	2·1648771	54·79957
3180	1·660	·017733	2·2487864	50·58832	4700	1·124	·014586	2·1639511	54·85572
3190	1·655	·017705	2·2481047	50·61639	4720	1·119	·014557	2·1630290	54·91187
3200	1·650	·017677	2·2474250	50·64447	4740	1·114	·014524	2·1621108	54·96802
3220	1·640	·017622	2·2460721	50·70062	4760	1·109	·014492	2·1611965	55·02417
3240	1·629	·017568	2·2447275	50·75687	4780	1·104	·014464	2·1602861	55·08032
3260	1·620	·017514	2·2433912	50·81292	4800	1·100	·014434	2·1593794	55·13647
3280	1·610	·017461	2·2420631	50·86907	4820	1·096	·014404	2·1584765	55·19262
3300	1·600	·017408	2·2407430	50·92522	4840	1·091	·014374	2·1575773	55·24877
3320	1·590	·017355	2·2394310	50·98137	4860	1·087	·014344	2·1566819	55·30492
3340	1·581	·017303	2·2381268	51·03752	4880	1·082	·014315	2·1557901	55·36107
3360	1·571	·017251	2·2368304	51·09367	4900	1·078	·014285	2·1549020	55·41722
3380	1·562	·017200	2·2355416	51·14982	4920	1·073	·014256	2·1540174	55·47337
3400	1·553	·017150	2·2342605	51·20597	4940	1·069	·014227	2·1531365	55·52952
3420	1·544	·017100	2·2329869	51·26212	4960	1·065	·014199	2·1522592	55·58567
3440	1·535	·017050	2·2317208	51·31828	4980	1·060	·014170	2·1513853	55·64182
3460	1·526	·017000	2·2304620	51·37442	5000	1·056	·014142	2·1505150	55·69797
3480	1·517	·016951	2·2292104	51·43057	5040	1·048	·014086	2·1487847	55·81027
3500	1·509	·016903	2·2279660	51·48672	5120	1·031	·013975	2·1453650	56·03487
3520	1·500	·016855	2·2267287	51·54287	5200	1·015	·013888	2·1419983	56·25947
3540	1·491	·016807	2·2254984	51·59902	5280	1·000	·013862	2·1386830	56·48407
3560	1·483	·016760	2·2242750	51·65517	5360	·985	·013659	2·1354176	56·70867
3580	1·475	·016713	2·2230585	51·71132	5440	·971	·013558	2·1322006	56·93327
3600	1·467	·016667	2·2218487	51·76747	5520	·957	·013460	2·1290305	57·15787
3620	1·459	·016620	2·2206457	51·82362	5600	·943	·013363	2·1259060	57·38247
3640	1·450	·016575	2·2194493	51·87977	5680	·930	·013268	2·1228258	57·60707
3660	1·442	·016530	2·2182595	51·93592	5760	·917	·013176	2·1197888	57·83167
3680	1·435	·016484	2·2170761	51·99207	5840	·901	·013085	2·1167936	58·05627

3700	1 427	016440	2	52 04822	5920	892		2 1138391	58 28087
3720	1 420	016393	2	52 10437	6000	880		2 1[illegible]211	58 50547
3740	1 412	016352	2	52 16052	6080	868		21	58 73007
3760	1 404	016308	2	52 21667	6160	857		21	58 95467
3780	1 397	016265	2	52 27282	6240	846		21	59 17927
3800	1 390	016222	2	52 32897	6320	836		20	59 40387
3820	1 382	016180	2	52 38512	6400	825		20	59 62847
3840	1 375	016138	2	52 44127	6480	815		20	59 85307
3860	1 368	016095	2	52 49742	6560	805		20	60 07767
3880	1 361	016054	2	52 55357	6640	795		20	60 30227
3900	1 354	016013	2	52 60972	6720	786		20	60 52687
3920	1 347	015972	2	52 66587	6800	777		20	60 75147
3940	1 340	015931	2	52 72202	6880	767		20	60 97607
3960	1 333	015891	2	52 77817	6960	759		20	61 20067
3980	1 327	015851	2	52 83432	7000	754		20	61 31297
4000	1 320	015811	2	52 89047	7040	750		20	61 42527
4020	1 313	015772	2	52 94662	7120	742		20	61 64987
4040	1 307	015733	2	53 00277	7200	733		20	61 87447
4060	1 300	015694	2	53 05892	7280	725		20	62 09907
4080	1 294	015655	2	53 11507	7360	718		20	62 32367
4100	1 288	015617	2	53 17122	7440	710		20	62 54827
4120	1 282	015580	2	53 22737	7500	704		20	62 71672
4140	1 275	015542	2	53 28352	7520	702		20	62 77287
4160	1 269	015505	2	53 33967	7600	695		20	62 99747
4180	1 263	015467	2	53 39582	7680	687		20	63 22207
4200	1 257	015430	2	53 45197	7760	680		20	63 44667
4220	1 251	015394	2	53 50812	7840	673		20	63 67127
4240	1 245	015358	2	53 56427	7920	667		20	63 89587
4260	1 239	015322	2	53 62042	8000	660		20	64 12047
4280	1 234	015286	2	53 67657	8080	653		20	64 34507
4300	1 228	015250	2	53 73272	8160	647		20	64 56967
4320	1 222	015215	2	53 78887	8240	641		20	64 79427
4340	1 217	015180	2	53 84502	8320	635		20	65 01887
4360	1 211	015145	2	53 90117	8400	629		20	65 24347
4380	1 205	015110	2	53 95732	8480	623		20	65 46807
4400	1 200	015076	2	54 01347	8560	617		20	65 69267
4420	1 194	015041	2	54 06962	8640	611		20	65 91727
4440	1 189	015007	2	54 12577	8720	605		20	66 14187
4460	1 184	014974	2	54 18192	8800	600		20	66 36647
4480	1 179	014940	2	54 23807	8880	595		20	66 59107
4500	1 173	014907	2	54 29422	8960	585		20	66 81567

TABLE XXX.—*continued.*

Feet r Mile.	$\sqrt{S}$	log. $\sqrt{S}$	$a+\frac{a}{S}$	Sine of Inclination Lower.	Fall in Feet Per Mile.	$\sqrt{s}$	log. $\sqrt{s}$	$a+\frac{a}{s}$
·587	·010541	2·0228787	66·92797	15010	·351	·008154	3·9113761	83·88527
·584	·010518	2·0219158	67·04027	15120	·349	·008133	3·9102211	84·10987
·579	·010172	2·0200026	67·26487	15200	·347	·008111	3·9090782	84·33447
·574	·010427	2·0181061	67·48947	15280	·346	·008090	3·9079383	84·55907
·569	·010380	2·0162260	67·71407	15360	·344	·008069	3·9068014	84·78367
·561	·010336	2·0143621	67·93867	15440	·342	·008048	3·9056764	85·00827
·559	·010293	2·0125140	68·16327	15520	·340	·008027	3·9045541	85·23287
·555	·010249	2·0106815	68·38787	15600	·339	·008007	3·9034377	85·45747
·550	·010206	2·0088644	68·61247	15680	·337	·007986	3·9023270	85·68207
·545	·010161	2·0070623	68·83707	15760	·335	·007966	3·9012219	85·90667
·541	·010122	2·0052751	69·06167	15840	·333	·007946	3·9001224	86·13127
·537		2·0035025	69·28627	15920	·332	·007926	3·8990285	86·35587
		2·0017442	69·51087	16000	·330	·007906	3·8979400	86·58047
		2·0000000	69·73547	16080	·328	·007886	3·8968570	86·80507
		3·9982698	69·96007	16160	·327	·007867	3·8957793	87·02967
		3·9965531	70·18467	16240	·325	·007847	3·8947070	87·25427
		3·9948500	70·40927	16320	·324	·007828	3·8936399	87·47887
		3·9931602	70·63387	16400	·322	·007809	3·8925781	87·70347
		3·9914833	70·85847	16480	·320	·007790	3·8915214	87·92807
	768	3·9898194	71·08307	16560	·319	·007771	3·8904698	88·15267
	·009731	3·9881680	71·30767	16640	·317	·007753	3·8894233	88·37727
	·009695	3·9865292	71·53227	16720	·316	·007731	3·8883819	88·60187
·492	·009658	3·9849026	71·75687	16800	·314	·007715	3·8873454	88·82647
	93	3·9832881	71·98147	16880	·313	·007697	3·8863138	89·05107
		3·9816856	72·20607	16960	·311	·007679	3·8852871	89·27567
		3·9800947	72·43067	17000	·311	·007670	3·8847755	89·38797
		3·9793037	72·51297	17040	·310	·007661	3·8842652	89·50027
		3·9785155	72·65297	17120	·308	·007643	3·8832481	89·72487
	483	3·9769176	72·88027	17200	·307	·007625	3·8822358	89·94947
	3449	3·9753910	73·17987	17280	·306	·007608	3·8812281	90·17407
	·009416	3·9738455	73·32917	17360	·304	·007590	3·8802251	90·39867
	·009382	3·9723100	73·55307	17440	·303	·007573	3·8792268	90·62327
·462	·009350	3·9707870	73·77867	17520	·301	·007555	3·8782329	90·84787
·458	·009317	3·9692738	74·00287	17600	·300	·007538	3·8772437	91·07247
·455	·009285	3·9677710	74·22747	17680	·299	·007520	3·8762589	91·29707
·452	·009253	3·9662786	74·45207	17760	·297	·007501	3·8752785	91·52167
·449	·009221	3·9647963	74·67667	17840	·296	·007487	3·8743026	91·74627

11840	446	.009190		74.90127	17920	295	.007470		[illegible]
11920	443	.009160		75.12587	18000	293	.007454		[illegible]
12000	440	.009130		75.35047	18080	292	.007437		[illegible]
12080	437	.009099		75.57507	18160	291	.007421		[illegible]
12160	434	.009069		75.79967	18240	289	.007404		[illegible]
12240	431	.009039		76.02427	18320	288	.007388		[illegible]
12320	429	.009010		76.24887	18400	287	.007372		[illegible]
12400	426	.008980		76.47347	18480	286	.007356		[illegible]
12480	423	.008951		76.69807	18560	285	.007340		[illegible]
12560	420	.008923		76.92267	18640	283	.007324		[illegible]
12640	418	.008895		77.14727	18720	282	.007308		[illegible]
12720	415	.008867		77.37187	18800	281	.007293		
12800	413	.008839		77.59647	18880	280	.007278		
12880	410	.008811		77.82107	18960	279	.007262		[illegible]
12960	407	.008784		78.04567	19000	278	.007[illegible]		
13000	40[illegible]	.008771		78.15[illegible]97	19040	277	.007246		[illegible]
13040	405	.0087[illegible]7		78.2[illegible]027	19120	276	.007232		
13120	402	.008730		78.49487	19200	275	.007217		
13200	400	.008704		78.71947	19280	274	.007202		
13280	398	.008678		78.94407	19360	273	.007187		
13360	395	.008651		79.16867	19440	272	.007172		
13440	393	.008625		79.39327	19520	271	.007157		
13520	391	.008600		79.61787	19600	269	.007142		
13600	388	.008575		79.84247	19680	268	.007128		
13680	386	.008550		80.06707	19760	267	.007114		
13760	384	.008525		80.29167	19840	266	.007100		
13840	382	.008500		80.51627	19920	265	.00708		
13920	379	.008476		80.74087	20000	264	.007071		
14000	377	.008452		80.96547	20080	263	.007057		
14080	375	.008428		81.19007	20160	262	.007043		
14160	373	.008404		81.41467	20240	261	.007029		
14240	371	.008380		81.63927	20320	260	.007015		
14320	[illegible]61	.008357		81.86387	20400	259	.007001		
14400	[illegible]67	.008334		82.08847	20480	258	.006987		
14480	364	.008310		82.31307	20560	257	.006974		
14560	363	.008288		82.53767	20640	256	.006960		
14640	361	.008265		82.76227	20720	255	.006947		
14720	359	.008242		82.98687	20800	254	.006934		1
14800	357	.008220		83.21147	20880	253	.006920		1
14880	355	.008198		83.43607	20960	252	.006907		1
14960	353	.0081[illegible]6		83.66067	21040	251	.006894		1
15040	352	.008165		83.7[illegible]23[illegible]	21120	250	.006881		1